Vulnerable Customers & Energy Efficiency
SDRC 9.4 – Customer Engagement

ukpowernetworks.co.uk

UK Power Networks
Delivering your electricity

"The field officer was brilliant, we were talking and laughing; he was lovely, understandable, understood my concerns, took on board my issues."
energywise participant

"**energy**wise has really come at the right time; it's a helping hand, it's like a bonus things; we're really pleased about it, it's really helpful."
energywise participant

"I just think you have a lovely team that work well together. If I have any questions they are always well explained and you have a majority of mixed ethnic (sic) on your team which is good."
energywise participant

"The project is absolutely great; the people are very good, there's nothing I'd want to change. Everything is explained property. The best thing about it is the panel; I really like going to that."
energywise participant

"[The **energy**wise officers] were absolutely great; they came and knocked on the door; showed their ids, they asked if I had time, they were very polite; they listened to what I said, I was really happy with them."

""I was nervous about coming to the panel, as I'm not someone who likes speaking out, but I enjoyed the process and am more confident about it now."
energywise participant

"I'm on a pay as you go meter – it's great to see on the energy display how much energy I'm using and when I need to top up."
energywise participant

*In this page: quotes from **energy**wise participants on their experience within the project so far.*

This report summarises addresses the Successful Delivery Reward Criteria 9.4 "Customer Engagement" set out for the Vulnerable Customers and Energy Efficiency project, also known as **energy**wise, in its licence direction: https://www.ofgem.gov.uk/sites/default/files/docs/2014/01/vcee_project_direction.pdf

Contents

Definitions

Term	Description
Bonus Time	The time-of-use tariff offered to prepayment **energy**wise participants, which operates as a Critical Peak Rebate. It provides customers with notice of 'Bonus Time' periods during which time, for every unit of electricity they reduce their consumption by (compared to their average for that time), they will be refunded the cost of ten units.
Campbell Systematic Review[1]	Campbell Systematic Reviews follow structured guidelines and standards for summarising the international research evidence on the effects of interventions in crime and justice, education, international development, and social welfare.
Control group	The group that received all interventions in trial 2. It was used for comparison to the intervention group to see if the interventions had any effect in trial 1.
Customer Field Officer (CFO)	The intermediary hired by the project to be the contact for participants, and the 'face' of the project. The customer field officers' duties will include recruiting and engaging participants along with gathering data
Critical Peak Rebate (CPR)	When utilities observe or anticipate high wholesale market prices or power system emergency conditions, they may call critical events during pre-specified time periods. The price for electricity during these time periods remains the same but the customer is refunded at a predetermined value for any reduction in consumption relative to what the utility deemed the customer was expected to consume
DBS	Disclosure and Barring Service
DNO	Distribution Network Operator, responsible for managing one or more of the fourteen electricity distribution networks in Great Britain, delivering electricity to customers
DSR	Demand Side Response is a change in electricity consumption in response to a signal (e.g. financial incentives)
EPC	Energy Performance Certificate
Energy Social Capital (ESC)	Context-specific social capital: purposively seeking information from people known to the respondent on the topic of energy efficiency in a home
External control group	A group that does not receive an intervention as part of the project, but has had a smart meter installed previously. The external control group will enable generalisations to the wider population and enable understanding of influence of external factors on energy consumption, for example fuel price changes
HAN	Home Area Network.
HEFT	HomeEnergy FreeTime – the trial 2 time-of-use tariff offered to credit participants, offering free electricity from 9am to 5pm on their choice of either Saturday or Sunday
HES	Home Energy Survey
Intervention Group	This is the group exposed to the treatments (interventions) in trial 1
LCL	Low Carbon London
LCNF	Low Carbon Networks Fund, administered by Ofgem. Designed to support projects sponsored by DNOs to try out new technology, operating and commercial arrangements. The aim of the projects is to help all DNOs understand how they can provide security of supply at value for money as Britain moves to a low carbon economy
LED	Light-emitting Diode

[1] http://www.campbellcollaboration.org/artman2/uploads/1/C2_Protocols_guidelines_v1.pdf

Term	Description
Loop monitor	The electricity monitoring equipment installed in prepayment control group households. It consists of a clamp connected to the standard meter tracking the electricity consumption. It is configured to return half hourly readings intervals
MDU	Multi Dwelling Unit meaning a building housing more than one premises with physical disparate metering such that a wireless MDU Communication Infrastructure is required
MDU Communication Infrastructure	The wireless communication infrastructure that will be tested, installed and commissioned in MDU buildings
Pilot study	A small scale preliminary study that usually takes place before full investigation in order to test certain elements of the main study e.g. a research design
QA	Quality Assurance
Smart Energy Monitor	The display unit that accompanies the smart meter that displays the energy consumption and cost of energy unit. It is also known as In Home Display (IHD)
Smart Energy Expert	The appropriately trained engineer of British Gas tasked to install smart meters according to the Smart Meter Installation Code of Practise (SMICoP) and internal British Gas processes
Smart meter	The advanced meter offered by British Gas as part of their business as usual activities offering advanced functionality compared to a traditional meter
SMETS	Smart Meter Equipment Technical Specifications
Time-of-use (ToU) tariff	A tariff that encourage consumers to use electricity at times when it is available cheaply. This can support a more flexible and sustainable electricity system.
VCEE	Vulnerable Customers and Energy Efficiency, the official title of this project as registered with Ofgem

1 Executive Summary

In December 2013, UK Power Networks was awarded £3.3million of funding from Ofgem's Low Carbon Network Fund (LCN Fund) for the Vulnerable Customers and Energy Efficiency (VCEE) Tier 2 project also known as **energy**wise. The **energy**wise project investigates how DNOs, in collaboration with an energy supplier, charity groups and local community actors, can support residential customers who may be struggling with fuel bills to better manage their household energy usage and consequently their energy bills by changing their behaviour.

To date there has been a limited evidence base of the benefits that can be achieved by the fuel poor when provided with smart metering solutions, time-of-use (ToU) tariffs and other energy saving measures. The overarching aim of the project is therefore to monitor and measure the impact of such interventions in order to enhance insights into the need of the fuel poor customers and explore the means to engage with them to facilitate increased participation in energy saving and Demand Side Response (DSR) campaigns. Within this context the project will demonstrate the extent to which this group can be engaged in such activities and consequently whether changes in their energy consumption away from peak demand periods can benefit the network by deferring or avoiding network reinforcement.

This report meets the fourth Successful Delivery Reward Criteria (SDRC 9.4: Customer engagement) and is focused on the methods and achievements relating to recruiting and engaging customers on the project. It is intended for:

- Policy makers and consumer groups seeking to engage vulnerable of fuel poor customers during smart meter roll-out and energy efficiency campaigns, including policy makers, energy suppliers, DNOs and other organisations;
- Other DNOs and researchers developing or running trials with residential customers.

energywise is the first Low Carbon Network Fund project to test how a DNO, in collaboration with an energy supplier and trusted local intermediaries, can effectively engage with fuel poor customers on initiatives that can support them in the management of their energy use through smart meter solutions, energy efficiency devices and advice, and demand side response (DSR) opportunities. The project is split into two trials:

- trial 1 involves testing the impact of smart meters and energy efficiency devices; and
- trial 2 involves testing time of use tariffs, with a static 'HomeEnergy FreeTime' tariff offered to credit participants and a Critical Peak Rebate 'Bonus Time' tariff offered to prepay participants.

The recruitment and engagement of participants to the project has been critical to the project's success. A customer recruitment and engagement strategy was developed for the project, based on best practice and learnings from other similar projects and was developed in consultation with the project partners around the following three key elements:

- face to face communication and support, which is critical to recruiting and maintaining engagement of fuel poor trial participants
- initial contact coming from a trusted local organisation such as a housing provider or a well-respected local community centre with excellent understand of the local areas and languages; and
- an engagement strategy and materials tailored to the target population.

Local community partners are therefore key to the project's customer engagement activities which are led by a team of customer field officers located at the Bromley by Bow local community centre.

Before recruitment commenced, materials and messages were drafted, in consultation with partners, and tested with a focus group of local residents in trial 1 and via the project's participant panel meetings in trial 2. This provided vital feedback enabling messages and designs to be improved to be more appropriate for the audience.

For trial 1, the proposed recruitment approach and updated materials were also piloted to test responses and processes before the main recruitment phase launched.

The recruitment approach for trial 1 was centred on face to face interaction comprising an invitation letter and then door knocking by the customer field officers with support from specialist recruiters, and follow up phone calls where necessary. For trial 2, phone calls were the main method of recruitment as participants were already engaged with the project. There has also been an ongoing programme of engagement with participants including regular participant panels and a quarterly newsletter. A dedicated customer field officer team has been in place throughout the project, available to provide any support or assistance to participants as required. Both recruitment and installation phases have been evaluated through analysis of recruitment data, a non-participation survey, telephone interviews with a sample of participants, participant panels involving a sub-set of participants and a workshop with project partners, recruiters and installers.

For trial 1, a 40% sign-up rate was achieved, exceeding the 33% target. 82% signed up after a door knock, and 91% signed up within four interactions – demonstrating that the face to face approach was successful. The distribution of participants over different ethnic groups and age bands, together with the high volume of participants speaking Bengali as primary language (114 out of 278 respondents), suggests that the recruitment strategy was inclusive to all. It also indicates that the project's innovative approach based on partnership working with trusted local intermediaries with local intelligence and language skills was suitable for the target population.

The top reasons for signing up were the opportunity to save money, better visibility of energy bills through having a smart meter, the offer of free devices, easier top up for prepay customers and the opportunity to take part in an interesting project. Main reasons for not signing up were lack of interest in the project or perceiving it to be too much hassle, customers being or about to become ineligible through changing supplier or moving home; and being sceptical of, or not interested in, the potential benefits of smart meters.

For trial 2, an 86% signup rate was achieved from participants. This high rate was the result of an attractive offer, an already engaged audience, materials that were designed with the target audience in mind (and building on feedback from trial 1 materials), the high level of trust that participants placed in the customer field officer team and incorporating lessons from the trial 1 recruitment strategy.

230 credit and 93 prepayment smart meters have been successful installed in participants' homes and a total of 1,879 energy saving devices have been delivered to the **energy**wise customers by the customer field officer team. Participants were generally very positive about the installation process and were happy with the installation teams. The process was refined over time to provide a smoother customer journey so that, by trial 2, the average time between sign-up and install was dramatically reduced. With hindsight, it would have been useful to pilot the install process as well the recruitment approach. Having the energy supplier manage the installation process end-to-end rather than having third party installers (in addition to their own) would have reduced the number of customer interactions required, thus potentially reducing dropouts by minimising disruption for participants.

The project experienced higher numbers of dropouts than anticipated, mostly before the trial 1 installations. Top reasons given were the perceived hassle of installation or changing their mind about wanting a smart meter. More participants than anticipated also had to be disengaged from the project, primarily because they had become ineligible (moved house or changed supplier), there was a technical problem with the install, or the customer failed to respond to request for an install appointment or did not provide access at the time of appointment.

Participant dropouts could be minimised by avoiding the need to install equipment that is outside the main project scope where possible (e.g., in the case of **energy**wise, the temperature monitoring equipment), minimising the number of interactions with customers, and providing very clear messages about what will be installed when and by whom. Providing participants with the opportunity to share experiences at participant panels has proved

valuable in terms of identifying any potential problems and taking action to mitigate risks. As a result, dropout rates have dropped dramatically since the trial 1 installations were completed. The low dropout rate also reflects the fact that the field officer team is available to support participants throughout the duration of the project; not just during the recruitment and installation phases.

As part of the project, UCL has conducted research with **energy**wise participants about their 'Energy Social Capital' and its evolution over time. Energy Social Capital (ESC) is defined in the project as the information resources related to household energy use embedded in social networks. The research has found an increase in ESC and its use by participants over the course of trial 1. This includes an increase in ESC resources related to smart meters, with more respondents feeling they know someone they can ask about smart meters. Other stakeholders aiming to increase the uptake and effective use of smart meters and DSR offers could similarly aim to build their participants' ESC. This project demonstrates engagement methods that can help achieve this aim and a set of surveys that help track progress towards it.

Key learnings for others looking to implement similar projects that involve engaging with hard to reach groups are:

- have a good offer and ensure that customers understand the benefit to them;
- there isn't a one-size-fits-all approach; design an engagement strategy tailored to the specific needs of the target population and the demographics of the area;
- engage with the community to understand their needs, who they trust, the messages that resonate and what works for them;
- work in collaboration with highly respected, trusted local intermediaries;
- use or set up an appropriate and effective field team that is well managed; this should include a customer field officer team with local intelligence and language skills;
- the partnership is key; bring together organisations with the required combination of expertise and invest time in designing the partnership..

energywise has successfully brought together a number of very different organisations with the necessary range of expertise to successfully implement a complex programme of this nature. This has included development a successful and mutually beneficial collaboration between the DNO and a local community. The Bromley by Bow Centre's role on the project of trusted intermediary, connecting UK Power Networks with the local community and residents, has been instrumental to engaging a hard to reach community in Tower Hamlets.

2 SDRC 9.4 Evidence and Sections

It should be noted that this report includes activities and learnings related to participant recruitment as well as engagement, since recruitment is the first phase of engagement.

The report is structured as follows:

Introduction and description of the project

- Section 3 introduces the project, its partners and objectives.
- Section 4 introduces the customer recruitment and engagement strategy and explains how best practice has been incorporated into this.
- Section 5 explains the approach to recruiting customer for trial 1 and how the installation process for this trial was managed, while section 6 explains the process for recruitment and installation on trial 2. Section 7 explains the approach to ensuring ongoing engagement of participants throughout the project.

Analysis of outputs and outcomes

- Section 8 presents the findings from an evaluation of the recruitment and engagement activities, breaking this down into the two trials and the ongoing engagement before drawing conclusions about efficacy of engagement strategies to support fuel poor and vulnerable customers on energy saving and DSR activities.
- Section 9 explores the reasons for participants dropping out of the project and draws conclusions about steps that can be taken to minimise this.
- Section 10 presents the findings from UCL's 'Energy Social Capital' research with participants and how this has changed over the course of the project.
- Section 11 presents all the learning outcomes from the project.
- Section 12 presents the overall conclusions

Appendices

- Appendix A contains the best practice literature review summary that informed the development of the recruitment and engagement strategy.
- Appendix B presents the recommendations from the pilot phase.
- Appendix C presents a summary of the key learning points for replication of similar initiatives.

The table below illustrates how each evidence item for the Successfully Delivery Reward Criterion 9.4 has been addressed in this report.

Criterion (9.4) : Customer engagement	
Evidence Item	**Report section**
A review of best practice in fuel poor customer engagement.	4.2 Appendix A
A review of best practice in trial panel maintenance (e.g. methods to minimise participant dropout), particularly in trials with vulnerable participants.	4.2 Appendix A
Quantitative analysis of longitudinal survey of participants' energy knowledge resources (Energy Social Capital) within their social networks and how these have changed over time.	10
Findings from interviews with trial participants on the efficacy of different engagement activities conducted throughout the trials.	8.3 8.4
Statistics on participation attrition and reasons for participant dropout.	9

3 Introduction

3.1 The Project

Figure 1: Project brand

The Vulnerable Customers and Energy Efficiency (VCEE) project also known as **energy**wise (Figure 1) is a partnership between ten organisations, led by UK Power Networks. Ofgem awarded the project £3.3 million of funding, under the LCNF competition scheme in December 2013.

energywise is exploring how residential customers who may be struggling with fuel bills can better manage their household energy usage and consequently their energy bills by changing the way they use electricity. The project is doing this by undertaking a research study with the aim to recruit 550 households who may be struggling with their energy bills in the London Borough of Tower Hamlets and carrying out two trials. The trials will test different ways of helping households better understand and control their electricity spending, enabling them to make changes which may save them money on their energy bills.

Firstly, the project is currently exploring whether households benefit from smart metering solutions (smart meter and smart energy display) and from energy efficiency technologies such as energy efficient light bulbs, an eco-kettle and standby shutdown.

Second, the project will work to understand households' appetite to change their behaviour when on a 'time-of-use (ToU)' tariff targeting electricity, with favourable rates within specific time windows.

The project plans to understand:

- The extent to which this residential customer group is able and willing to engage in energy saving campaigns and a ToU tariff;
- The benefits that they can realise from their change of behaviour in household energy management;
- The challenges and best approaches to engaging with these groups of customers to achieve these aims; and
- Whether their reduction in demand, and shifting demand away from network peak periods may benefit the electricity network by deferring or avoiding network reinforcement.

This report addresses the process for recruiting and engaging participants in the project. It presents key achievements and lessons from the recruitment and installation phases of the project as well as the ongoing engagement activities. The report provides information and learning that will inform best practises to engaging hard-to-reach customers in the smart meter roll-out and similar energy efficiency campaigns.

3.2 Project partners

energywise is a partnership between ten originations led by UK Power Networks (Table 1).

Table 1: energywise **partners**

Project Partner	Role in Project
UK Power Networks	UK Power Networks owns, operates and manages three of the fourteen electricity distribution networks in Great Britain, delivering electricity to over eight million customers in London, East and the South East of England. UK Power Networks own the licensed distributors London Power Networks plc, Eastern Power Networks plc and South Eastern Power Networks plc. UK Power Networks is a network operator and does not generate or buy electricity nor does it sell to end customers. UK Power Networks operates in the most challenging, fastest growing, and highest cost part of the country. As a DNO, UK Power Networks takes electricity at high voltages from the National Grid and transforms it down to voltages suitable for commercial and domestic use.
British Gas	The role of British Gas in the project is related to technical enablement and will provide the smart meters, smart energy display (SED), and ToU tariff required for the targeted customer group to engage with demand side response. British Gas will also install (in cooperation with its contractors) the appropriate communication infrastructure required at households that require a communications solution for installing smart meters and smart energy displays in complex Multiple Dwelling Units (MDU) with challenging meter arrangements. Please note British Gas are providing considerable in-kind funding to the project.
UCL	Since its foundation in 2009 UCL-Energy has developed a strong national and international reputation for research in energy demand and energy systems. University College London is the research authority of the project and its aim is to ensure that the results of the trials are statistically rigorous and the findings could be replicated in future.
Tower Hamlets Homes	Tower Hamlets Homes is the arm's length management organisation of the London Borough of Tower Hamlets, managing the council's housing stock on its behalf. Tower Hamlets Homes has provided a list of eligible tenants, along with insights into the area and local intelligence that has shaped the customer engagement strategy.
Poplar HARCA	Poplar HARCA is a registered social landlord that operates as an independent non-profit charity in the London Borough of Tower Hamlets, separate from the local authority. Poplar HARCA has provided a list of eligible tenants. They will also provide insights into the area and local intelligence that has shaped the customer engagement strategy.

Project Partner	Role in Project
bromley by bow centre	Bromley by Bow community Centre is a local charity established in 1984 by Andrew and Susan Mawson and has built up considerable goodwill in the area. They are the employer of the project's customer field officer (CFO) team, which is going to be a team dedicated to the recruitment and engagement with the trial participants (prospective and actual).
CAG consultants	CAG Consultants is a sustainability, climate change and community engagement consultancy which is going to represent the voice of the customer in the project. CAG Consultants will provide specialist support, guidance, mentoring, training and evaluation of recruitment and engagement with vulnerable and fuel poor customers.
NEA Action for Warm Homes	NEA is the national fuel poverty charity which aims to eradicate fuel poverty and campaigns for greater investment in energy efficiency to help those who are poor and vulnerable. NEA will provide expertise in energy efficiency and customer focus due to its continuous engagement with fuel poor customers.
elementenergy	Element Energy is a strategic energy consultancy specialising in the intelligent analysis of low-carbon energy across the sectors of power generation and distribution, transport and buildings. Element Energy will provide the analysis of the network impacts of the energy saving and energy shifting interventions through network modelling within the trial area.

3.3 Project overview

The project explores how low income households who may be struggling with fuel bills can better manage their household energy usage. The overall timeline of the project is presented in Figure 2. It in involves two trials, as shown in Figure 3.

Upon signing up to the project, participants were randomly split into one of two groups:

- the intervention group (group 1) who received their smart meter, Smart Energy Monitor and devices at the start of trial 1, and are then offered a time-of-use (ToU) tariff before trial 2; or
- the control group (group 2), who did not receive the interventions in trial 1 (in order to be used for comparison to the intervention group to see if the interventions had any effect). They received their devices at the start of trial 2.

Both groups are merged together in the second trial by which time they have all received the same interventions. Participants have also had temperature monitoring equipment installed as a customer protection measure.

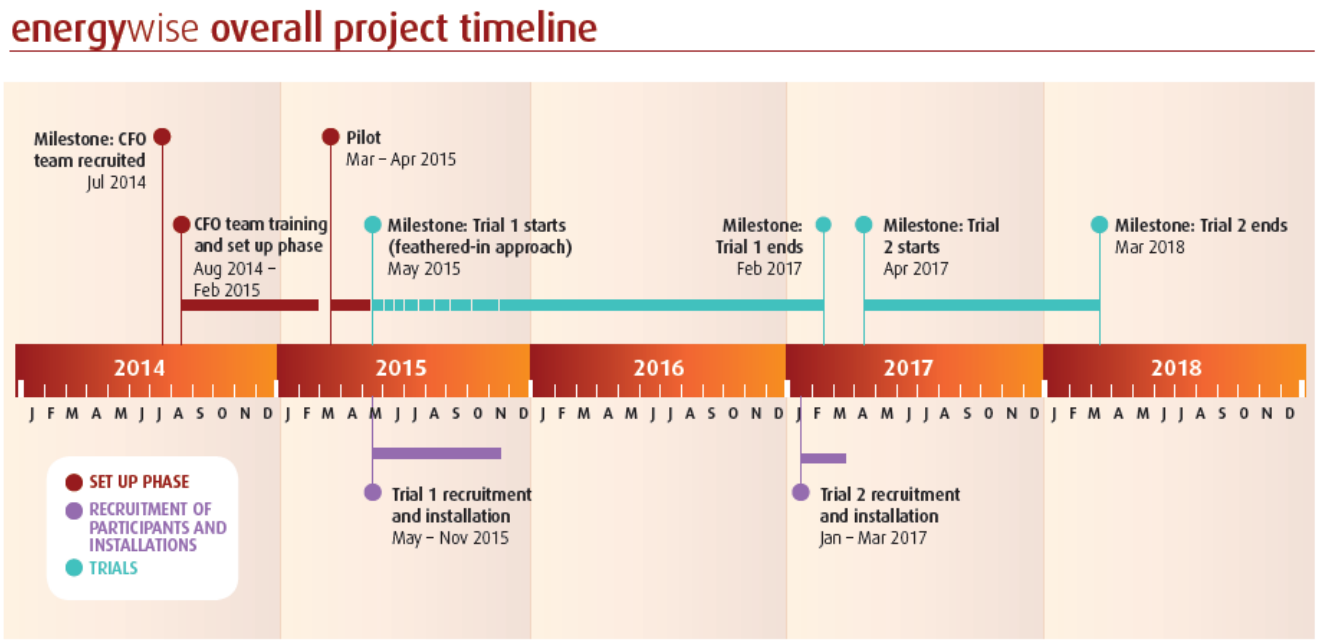


Figure 2: Overall project timeline showing the set up phase (including the project pilot), trial 1 and trial 2.

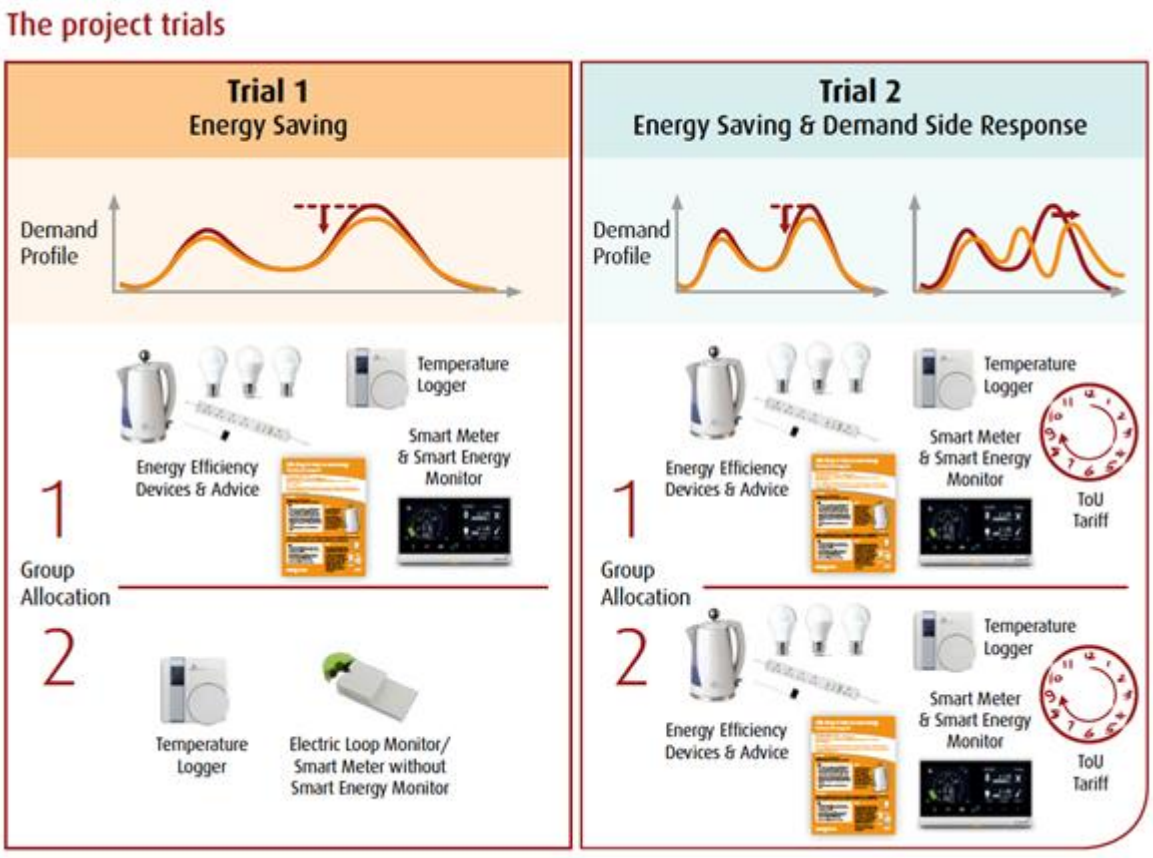


Figure 3: The project trials

3.4 Project aims and objectives

The aim of the project is to understand how fuel poor households can benefit from smart meters, smart energy displays and energy efficiency appliances, and also how they respond to ToU electricity tariffs. The project has three specific objectives:

- **Engage fuel poor customers to understand how they can benefit from energy efficiency and participate in demand side response.** Reducing electricity consumption may result in lower bills and could thus assist in reducing the likelihood of these households being in fuel poverty or the depth of their fuel poverty.
- **Quantify the demand reduction and time-shifting that these customers could provide.** Quantification is vital if initiatives like **energy**wise are to attract similar status to other proven interventions such as cavity wall insulation and low energy lightbulbs. The peak time for electricity consumption in the UK is typically between 5 and 8pm for domestic customers[2]. Limited direct research has been conducted in the electricity profile of the fuel poor domestic customer group and one of the project aims is to improve understanding of the demand profile of this domestic customer group in trial 1 and based on this understanding develop an appropriate ToU tariff(s) for use in trial 2.
- **Understand the challenges and best approaches to engaging with this group of customers.** It is frequently argued that fuel poor customers require additional help and support to engage with smart meters and energy efficiency devices in order to enable them to access the benefits of these. UK Power Networks found that in the LCL trials, those living in areas categorised as being 'Inner City Adversity' were the most likely to refuse a smart meter, stating that they felt it was too technical or confusing. The project is investigating how existing social networks, which fuel poor households trust, can be identified and used to effectively engage these customers in the adoption and use of smart metering technologies. It also investigates what engagement materials and communication channels are most effective in engaging with and supporting these customers.

The project will provide DNOs and suppliers with evidence-based learning on how to work with third party agencies to deliver energy efficiency and demand side response campaigns to fuel poor customers. It will also determine the extent to which fuel poor customers are willing and able to provide demand reduction and time-shifting services to alleviate network constraints and whether this is material.

The LCL project found that there are sizeable opportunities for lower income households to reduce energy use, particularly at peak times, through changes to their lighting and appliances, particularly in households of three or more people. Moreover, research carried out for DECC and Defra, using data from 250 households, estimates that fuel poor households have the technical potential to reduce their demand by an average of around 650 kWh per year[3]. Analysis of these figures suggest that a peak shift for fuel poor households of up to 200 MVA across Great Britain is technically possible[4]; this is the equivalent to the output from a small-to-medium sized power station. These figures were based on owner occupiers whereas **energy**wise focuses on social housing tenants; this project is contributing to fill this gap in data. They are also based on assumptions about occupant behaviour rather than observations and thus are not strictly speaking comparable with the findings of field trials.

3.5 How is the project breaking new ground?

The project is breaking new ground in a number of areas:

- **Customer insights:** Exploring how fuel poor customers can respond to energy efficiency measures, smart meter information and price signals in order for them to reduce their energy bills. The project is also investigating what opportunities can be created for the customers through an end-to-end coordinated

[2] Elexon 2013 'Load Profiles and their use in Electricity Settlement" https://www.elexon.co.uk/wp-content/uploads/2013/11/load_profiles_v2.0_cgi.pdf

[3] Source: DECC, Defra and the EST (2012), Household Electricity Survey: A study of domestic electrical product usage

[4] Low Carbon Networks Fund submission from UK Power Networks – Vulnerable Customers and Energy Efficiency, 28th November 2013

approach between different parties in the value chain. Also, the needs of the fuel poor will be further analysed, identified and profiled and such learning can tailor services offered.

- **Network insights:** Investigating the ability of fuel poor customers to reduce and shift their electricity consumption away from peak times and establishing whether the impact of this is significant enough to defer network reinforcement. The project will support suppliers and DNOs in realising this potential contribution in a sustained manner, thus helping DNOs to manage the increasing and uncertain demands on the network.
- **Customer recruitment & engagement:** Establishing how best to engage with fuel poor customers on energy efficiency and demand response including the most effective messages and approaches. In addition, the project is going to provide insights on the challenges faced and best practises identified when recruiting and engaging with fuel poor customers and this learning will be used in order to tailor the services offered from the DNO and other stakeholders participating in the project.
- **Innovative partnerships:** Exploring the effectiveness of DNOs and energy suppliers working with trusted local organisations who support those in fuel poverty and whether and how this can result in fuel poor customers being better served. The project lessons learnt will provide recommendations on how DNOs can work collaboratively with electricity suppliers and community actors to better identify, understand the needs, assist and deliver services to the fuel poor, within existing obligations.
- **Non-punitive time of use tariffs:** One key area of innovation in the project is trialling both credit and prepayment non-punitive time of use tariffs with fuel poor customers. Trial 2 will provide learnings on the efficacy and consumer acceptability of this class of tariff for this customer segment. Only punitive tariff structures have been trialled in LCNF projects to date (e.g. CLNR and LCL). Having quantitative and qualitative data on fuel poor customers' responses to such non-punitive tariffs is critical to the understanding and evolution of this class of tariffs in Great Britain.

As part of the project, the energy supplier British Gas is also exploring the effectiveness of working with local and trusted third parties such as the housing provider and community centre in order to carry out a locally targeted, community-led installation programme of smart meters It is anticipated that this approach will lead to improved access rates for British Gas' Smart Energy Experts, greater community engagement and increased customer awareness of the benefits of smart metering, whilst lowering missed appointment and no-access rates.

3.5.1.1 Smart meter roll-out insights

The project also involves testing key parts of the smart meter infrastructure, including prepayment smart meters and the benefits they can bring to customers (such as remote top up) and how best to roll out smart meters in multiple dwelling units (which present a number of technical challenges):

- **Prepayment smart meters:** As part of **energy**wise, British Gas is testing its first SMETS1[5] compliant smart meters with prepayment functionality, outside their trial environment (with 93 prepayment smart meters installed as part of this project). This is providing an opportunity to gain valuable early learning as to the extent prepayment customers engage with smart meters and how they use their smart energy displays to manage their consumption and their budget. Smart prepayment will also open up new, more convenient payment options to customers (e.g. over the telephone, online of via their in-home display), meaning they no longer have to worry about losing their key card.
- **Multiple Dwelling Units (MDU):** Communications between meters in basements and displays in the home – in Trial 1, British Gas has installed a communications backbone into a block of flats where the meters are contained in a communal meter room in the basement, remote from the flats in which the residents themselves live and will be using their in-home displays. Within the Smart Metering programme, these are referred to as Multi Dwelling Units (MDUs) and are a known challenge for the roll-out. This communications backbone enables the smart meter Home Area Network (HAN) services to be received by the recruited households located on different floors of the building. These households would not otherwise have been able to fully access the benefits of the smart metering solution. This provides valuable technical learning, but also gives insight into the cost of this type of infrastructure as well as the

[5] SMETS1 are the first version of the Smart Meter Equipment Technical Specifications.

commercial arrangements required between energy supplier, landlord and customer. This is something that has not yet been fully resolved as part of the smart meter implementation programme and the demonstration carried out in Trial 1 is resulting in the UK's first end to end installation of residential smart meter sets operating across a MDU/tall and difficult building solution, thus informing the market.

Project innovation is summarised in Figure 4.

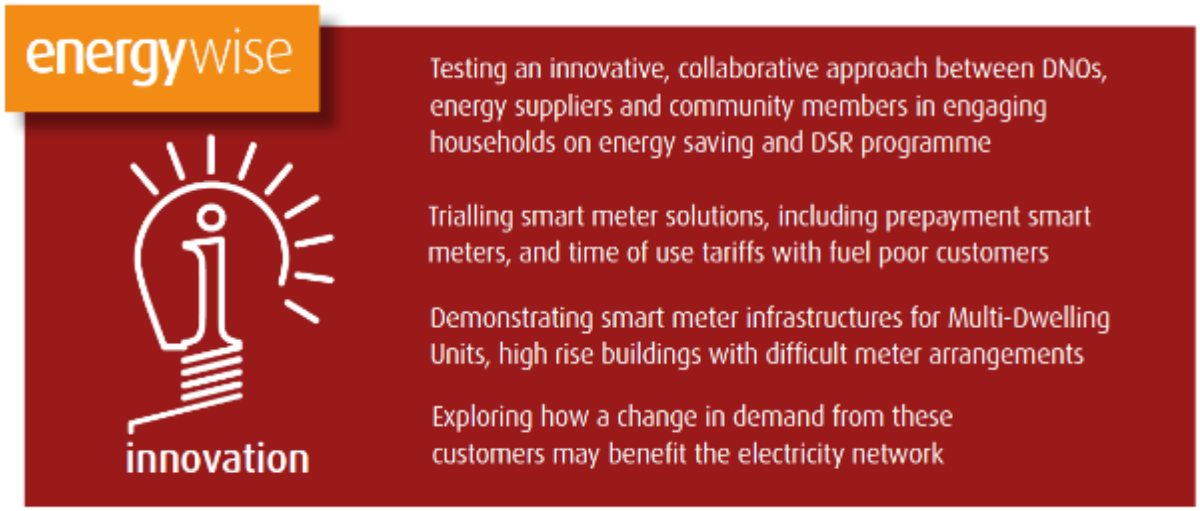


Figure 4: How energywise **is innovative**

4 Customer recruitment and engagement strategy

A communications strategy was developed in consultation with the project partners with the objective of recruiting and engaging customers.

4.1 Strategy objectives

The objectives of the project communication strategy are to:

- develop a customer engagement approach specifically tailored for fuel poor customers that will deliver maximum engagement levels in a sustainable and cost-efficient manner;
- recruit participants into a pilot study to test the project's communication messages and recruitment/engagement methods;
- recruit up to 550 households that meet the project's eligibility criteria (outlined in section 6.1 below) to take part in the project trials;
- ensure these households are provided with clear, easily understandable information about how the trials will work, what will be expected of them, how to make best use of the technologies they are provided with, and who to contact in the event of any problems or queries;
- ensure that communications are in line with project partners' current methods of communicating with customers (for example, following project partners' protocols on offering communication in alternative formats and languages);
- ensure that all communications are carried out in such a way that meets the project's data protection requirements;
- ensure that the communication is carried out in a way that supports, and does not conflict with, the research being carried out;
- maintain participant engagement throughout the duration of the trial in order to minimise dropout rates;
- manage participant issues, welfare and complaints; and
- manage participants who are leaving the trial.

There was from the outset a commitment to measuring the effectiveness of the project's approach to recruiting and engaging participants.

4.2 Strategy overview and incorporation of best practice

The project communications plan was based on best practice in terms of recruiting and engaging fuel poor customers as summarised in Figure 5. This included undertaking a literature review, interviewing project partners and identifying key lessons from other LCNF funded projects. Full details are outlined in the communications plan[6]. This was updated through additional research carried out in early 2017 (see Appendix A).

energywise is the first Low Carbon Network Fund project to test how a DNO, in collaboration with an energy supplier and trusted local intermediaries, can effectively engage with fuel poor customers on initiatives that can support them in the management of their energy use. As such, a project-specific strategy was developed based on the principles outlined in sections 4.2.1and 4.2.2, below.

Figure 5: A best practice approach

[6] http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

4.2.1 A community-based field officer team

The project approach is based on best practises that indicate that face to face communication and support are critical to recruiting and maintaining engagement of fuel poor trial participants (See the project's Communication Plan for further details[7]). Furthermore, this contact may come from a trusted local organisation such as a social housing provider or a well-respected local community organisation. Therefore, for this project, a team of dedicated, local based, community-centred customer field officers was appointed to lead on the recruitment and engagement of participants. These customer field officers (CFOs) are employed by local community charity Bromley by Bow Centre (Figure 6). Bromley by Bow Centre has had a key role on this project, playing the role of a trusted intermediary, connecting UK Power Networks with the local community and residents.

Figure 6: The energywise **customer field officer team**

They have gone through a thorough training and induction programme to ensure they have an excellent understanding of the project and technologies involves, as well as skills in customer engagement and in undertaking social research. Several of the customer field officers are from the local area and have an in-depth understanding of the local culture and some have relevant language skills – important for this project's target audience where a small minority do not speak English and a significant number have English as a second language. (Further details are provided in the SDRC 9.2 report[8].)

As well as leading on the recruitment of participants, the customer field officers also played a key role in:

- the installation of equipment, working in partnership with British Gas to book installation appointments and accompanying British Gas and Passiv engineers on installation appointments;
- delivering energy efficient devices to participants and facilitating access to participants' properties when required (e.g. overcoming language barriers);
- providing local phone and drop-in support and assistance;
- assisting with monitoring vulnerable customers and low temperature reports;
- running the participants panels, which were held at the Bromley by Bow Centre (a safe and convenient space that is local and easy to get to, where people know they can speak freely);
- ongoing customer care; and
- inputting into the development of the project by providing feedback on customer experiences.

British Gas were also instrumental in engaging with and supporting participants. Their highly trained and skilled Smart Energy Experts had knowledge of the local area and of locally spoken languages. British Gas staff have worked closely with the CFO team throughout the project and have been able to quickly resolve issues reported by participants or captured at the panel meetings.

4.2.2 Strategies to maximise recruitment and engagement and minimise participant dropouts

Evidence identified through the best practice review carried out at the start of the project suggests the following principles outlined in the table below should be followed to maximise recruitment and minimise dropouts. Table 2 indicates how these principles have been adopted in the development of this plan.

[7] http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/
[8] http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

Table 2: Principles to maximise recruitment and minimise participant dropouts

Principle	How included in project
Consider using pre-engagement research to design incentives, interventions and communication methods which will work with the target groups (LCNF factsheets[9]).	A focus group with Tower Hamlets community members was held in June 2014 to test key messages and communication materials.
Build relationships with organisations such as local authorities, housing associations, charities, to enable appropriate engagement (Citizens Advice 2017)	Local housing providers Tower Hamlets Homes and Poplar HARCA and local community charity the Bromley by Bow Centre are all project partners plus national fuel poverty charity NEA.
Use local community centres as a point of contact for customers to provide consumer-familiar surroundings in which to discuss smart meter related issues (Citizens Advice, 2017)	Local community centre (the Bromley by Bow Centre) is used as a point of contact for customers. This is where the customer field officers are based and where the participant panel meetings are held. Participants are welcome to drop in to the centre to talk to the field officer at any point during the project.
Recruitment should be appropriate to the target audience and type of intervention, e.g. primarily face to face for area-based community projects; mail out with telephone follow up for larger, more dispersed initiatives (LCNF factsheets).	Face to face communication is a key component of the recruitment for this area-based community project. All communication has been tailored to the target audience.
If using a recruitment questionnaire, keep it very simple (Raw and Ross 2011).	No recruitment questionnaire required.
Don't require customers to have more than two meter readings in a given period prior to the trial (Raw and Ross 2011).	No meter readings will be taken by the project prior to trials commencing.
Use established scripts of conversation guides when conversing with customers (Citizens Advice, 2017); keep Terms and Conditions very simple (Raw and Ross 2011).	Conversation guides where used by the field officers and recruiters at all stages of recruitment to the project and also to the DSR trial (trial 2). Terms and Conditions were kept as simple as possible.
Have a relatively short deadline for responding to an invitation to take part (e.g. two weeks) (Raw and Ross 2011).	The initial invitation letter will emphasise that places on the trial will be allocated on a 'first come, first served' basis to help incentivise timely sign-up. A reminder letter will be sent to customers shortly after the initial letter to prompt them to respond.
Systematically follow up letters with telephone calls (Raw and Ross 2011).	The project's planned recruitment process involved systematic follow up through door knocking and then telephone calls. (For trial 2 recruitment, participants received a phone call first, followed up by a door knock as necessary, since they were already engaged with the project.)

[9] As part of UK Power Networks' LCNF bid submission for VCEE, a template 'factsheet' was developed and sent to other DNOs delivery projects that were engaging with households to gather best practice and learning from these projects.

Principle	How included in project
Offer guarantees and a 'remove and make good' clause for people leaving the programme (Institute for Sustainability, 2013).	The temperature sensor equipment provided through this project will be removed by the project, where possible without any damage to participants' property. The project plan, during the term of trials, is that if the issued energy efficiency tools break, these will be replaced where possible.
Accept a statement of commitment from recruited customers by phone rather than in writing (Raw and Ross 2011).	The project consent process includes the option to sign-up by phone instead of face to face. This verbal consent will be followed up with a confirmation letter.
Train staff to recognize vulnerability (Citizens Advice, 2017)	Training in vulnerability was provided to the customer field officer team by NEA as part of their induction training.
Communications should be delivered by agencies with whom households have an existing relationship (NEA, 2013)	Communications are delivered either by the customer field officers (based at Bromley by Bow Centre, a well-known local community charity) or by British Gas (who is the energy supplier for all participants).
Help occupants cope with disruption and changes to their daily lives; experience of loft insulation roll-outs shows that offering back-up services to older and disabled households, such as loft clearance, is likely to increase take-up. (Institute for Sustainability 2013).	The customer field officer team is in place to support participants throughout the trials via several means, such as the provision on energy advice and systems to monitor participants' welfare.
Promote benefits of smart meters to increase acceptance, i.e. avoided hassle of meter readings, more accurate billings, chance to reduce energy bills (Buchanan et al, 2016).	Messages about smart meter benefits were included in all recruitment literatures.
Minimise the time between recruitment and installation (e.g. 2 weeks rather than 6 weeks). Linked to this, have installation resources organised to avoid delays from sign-up to installation (LCNF factsheets).	The project aimed to schedule installations shortly after sign-up, where possible.
Face to face contact will generate a far higher response rate than marketing by leaflet (Warm Zones pilots, National Energy Action 2005). Offering an out-of-hours service will maximise the effectiveness of door knocking (EST, 2011).	Face to face door knocking is the project's primary means of recruitment, with an out of hours service offered.
Provide appropriate incentives and budget for ongoing support to keep participants engaged (LCNF factsheet).	Participants will be offered compensation payments and the project includes budget for ongoing support and engagement activities.
Respond quickly to complaints, to minimise dropout (LCNF factsheet)	Customer complaints will follow the five-step Bromley by Bow Centre procedures already in place.

Principle	How included in project
All demonstrations and advice literature should offer a small number of key energy efficiency tips, including information on the comparative cost of devices (NEA, 2013)	Participants received energy efficient tips through: • An advice leaflet provided along with their energy efficiency devices; • The regular project newsletters; and • The shifting advice provided at the start of the trial 2 (this included information on the amount of electricity used by different appliances).
Vulnerable customers should be offered post-installation follow-up and support on how to use their IHD (Citizens Advice, 2016; NEA, 2013)	Participants are offered information through the newsletter and are also invited to contact the customer field officers if they have any queries at any point during the project. All participants receive a follow up call around a week after their smart meter has been installed to check all is well and to answer any questions.
Community events will facilitate face to face interaction and an explanation of smart meters (NEA, 2013)	Participants are invited to attend regular panel meetings where they can discuss their experiences on the project and have further explanation of how to benefit from the project.

5 Recruitment and engagement approach – trial 1

5.1 Timeline

Figure 7 below shows the timeline for the recruitment and installation phases for trial 1.

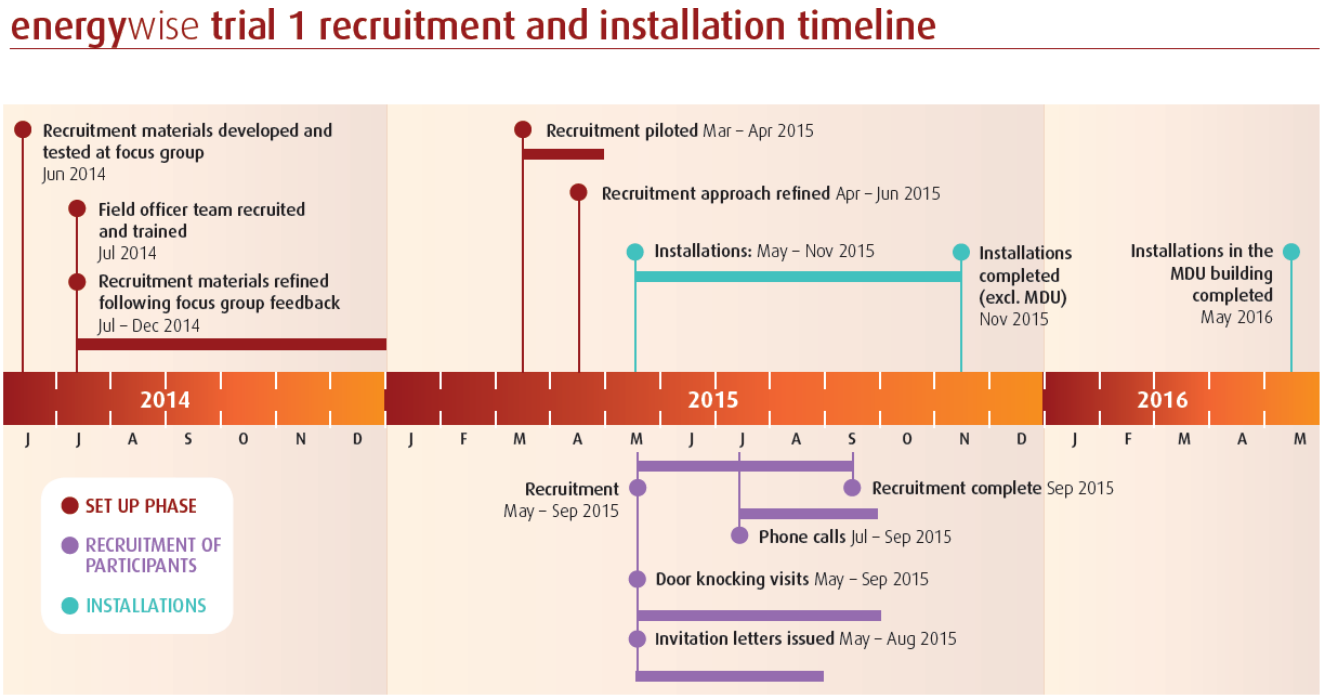


Figure 7: Recruitment and installation timeline

5.2 Identification of eligible participants

energywise is intended to engage fuel poor households. To be invited to take part in **energy**wise, households needed to be British Gas customers and tenants of either Tower Hamlets Homes or Poplar HARCA, living in less energy efficiency properties (Energy Performance Certificate band C or below). These latter criteria were selected as a proxy for fuel poverty, which is very difficult to measure exactly and which is primarily caused by low income and inefficient homes. Various other criteria were also applied, with a view to ensuring the necessary data could be accessed by the project and that the data comparison was not skewed by external influences. (These included no Economy 7 meter, no energy efficiency improvements planned; property not scheduled for demolition; the full list of selection criteria is provided in the SDRC 9.2 and 9.3 reports and in the Final Energy Saving Trial report[10].)

The target was to identify 1,650 eligible participants to invite to take part, with the objective of securing agreement from one in three of these. The process of pulling together the list of eligible participants involved multiple partners and multiple iterations in order to reach close to the target number potential participants. As a result, a maximum of 1,352 eligible participants were identified, as shown in Figure 8.

[10] These reports are all available on the project website http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

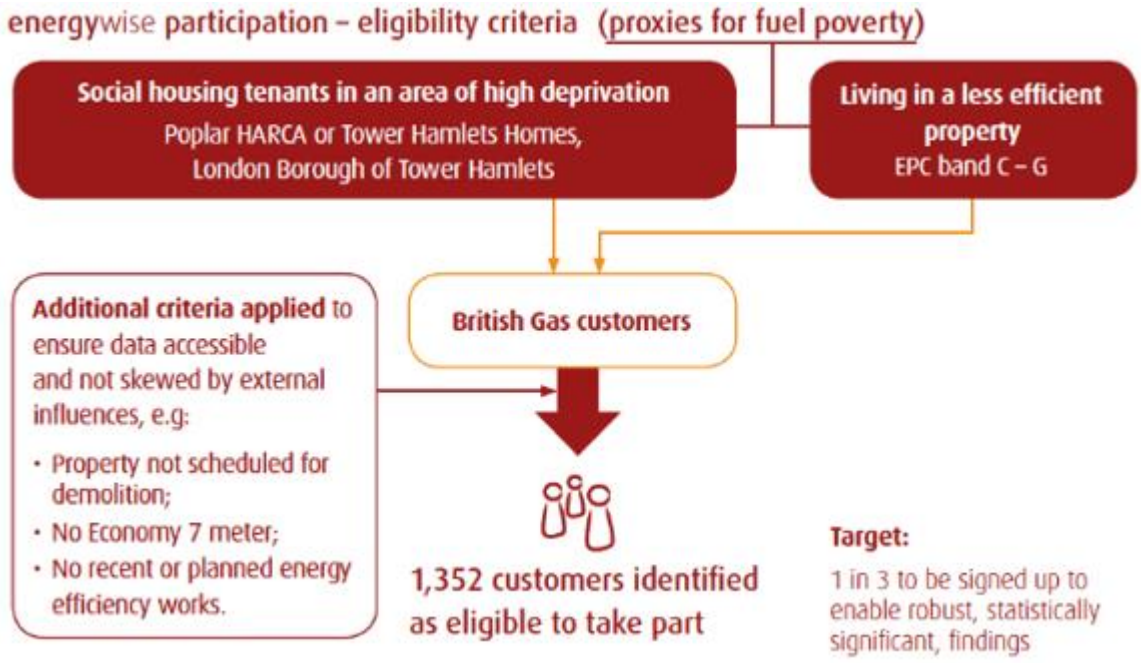


Figure 8: Eligibility criteria

5.3 Pilot

Prior to the main rollout of the **energy**wise project, the proposed recruitment materials and approach were tested (Figure 9).

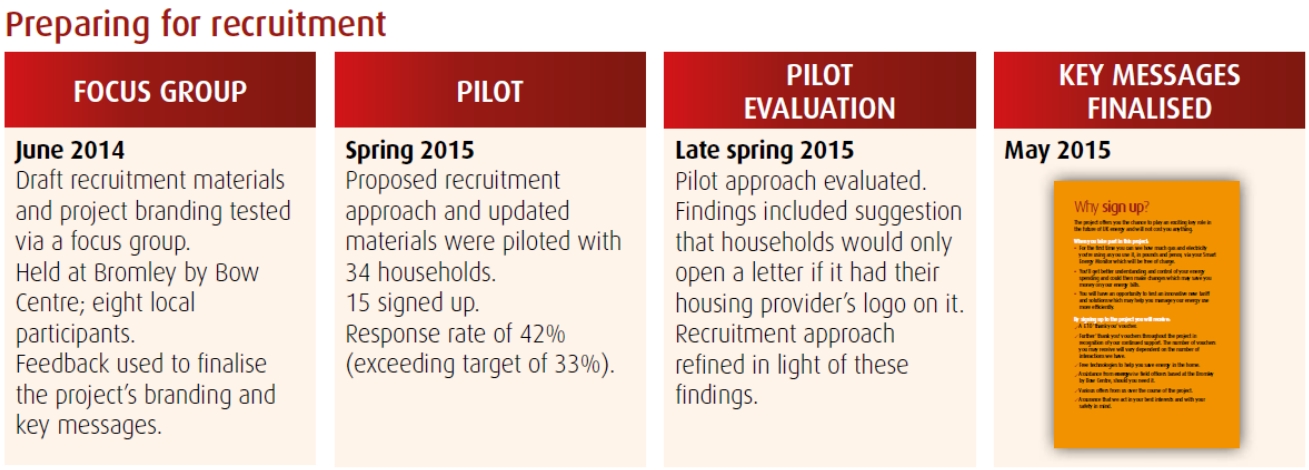


Figure 9: Preparing for recruitment

In June 2014, draft recruitment materials and two possible designs (one featuring an owl, the other featuring 'shapes' – see Figure 10) were tested via a focus group involving eight households, five of whom were white British and three of whom were of Asian descent. They were all residents local to the Bromley by Bow Centre, who were tenants of either Poplar HARCA or Tower Hamlets Homes, but not necessarily British Gas customers. Feedback on the two brands was very mixed:

- the owl brand was popular with the five White British participants (who found it to be 'wise', 'smart', crisp', 'eye catching' and 'appealing') but was not popular with the three non-White British participants. Given the ethnic diversity of the trial area, it was decided that this brand is not appropriate for this project. However, participants were generally positive about the colour scheme used in this logo.
- some participants were positive about the 'shapes' brand (it was felt to be 'comical' and 'appealing') but preferred the colour scheme of the owl brand. Others felt it was too 'busy', 'messy' or 'dull'.
- all participants were positive about the name '**energy**wise'.

Figure 10: The two brands presented to the focus group

These findings demonstrate the importance of testing communication materials and tailoring it to the target population.

Feedback from the focus group was used to finalise the project's branding and key messages. All character-based branding was removed. The project name '**energy**wise' and slogan 'be **energy**wise' was retained along with the strapline 'Little things to help you save energy'.[11]

Following on from this, in the spring of 2015, the proposed recruitment approach and updated materials were piloted with 36 households, of which 15 signed up to the project as a result, giving a response rate of 42% (exceeding the target of 33%). Project partner CAG Consultants undertook an evaluation of the recruitment of participants during this pilot, involving observation of door knocking and the drop-in event, a workshop with the customer field officer team, analysis of the tracker database and phone calls with some of the participants. The findings from this were reported in the SDRC 9.2 report[12].

Key findings from the pilot study evaluation were as follows:

- customers were positive about the recruitment materials which they generally found to be clear and well designed. They were also very positive about the field officer team, who they reported to be courteous and approachable
- systems and processes were generally working well
- the customer field officer team felt well informed and were supporting each other effectively
- many customers are Bangladeshi; there is a good sense of trust and connection between them and the field officer team, with the team regularly making use of their Bengali language skills
- the best times for door knocking are Saturday evening or lunchtime/early evening on weekdays.
- there was also some feedback from both customers and the field officer team which suggested a number of small changes could be made to make the recruitment process even more effective. These are summarised in Appendix B.

[11] Further details are provided in the SDRC 9.2 report http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

[12] http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

5.4 Recruitment approach

The lessons learned from the pilot were incorporated into the recruitment approach for trial 1, which focused on face to face engagement. The recruitment approach is summarised in Figure 11.

Once an invitation and reminder letters had been sent out (hand addressed, with a postage stamp rather than franking to encourage opening), the customer field officers went out to knock on the doors of invited households with a view to encouraging them to signup to the project (Figure 12).

At any stage during the process, customers could request a booked home visit from the field officers. In addition, 80 selected customers (living within one mile of the venue) were invited to attend a drop-in event to hear more about the project and have the opportunity to sign-up. Customers signing up received a Welcome Pack with a £10 voucher and the customer was randomly allocated to either the control or the intervention group.

Figure 12: A CFO talking to a potential participant about energywise

It was intended that, in addition to the core customer field officer team employed by Bromley by Bow Centre, additional recruiters would be taken on just for the recruitment phase. However, Bromley by Bow Centre experienced delays in scaling up the recruitment team in response to the increased volume of customers and in contracting an outsourced recruiter team.

Figure 11: The recruitment process

As a result, the project took a pragmatic 'all hands on deck' approach involving the appointment of specialist recruitment organisations, volunteers from UK Power Networks and the social housing providers, support from CAG Consultants in scheduling the door-knocking rotas and UK Power Networks providing coordination and management at Bromley by Bow Centre during key phases.

5.5 Recruitment materials

The following materials were used as part of the recruitment process:

5.5.1 Invitation letter and leaflet

An initial letter and leaflet (Figure 13) was sent out to all eligible participants inviting them to take part in the project. Customers were given the option of either signing-up on the project website or calling the CFO team. These were sent out in batches to enable follow up door knocks and phone calls to happen soon after the letter was received

A reminder letter was sent out a few days after the initial letter to those not responding to the first letter.

Figure 13: Invitation leaflet

5.5.2 Sorry we missed you' card

A 'sorry we missed you' card was left by the CFOs when door knocking if no-one was home (or they would not answer).

5.5.3 Key facts document

A key facts document was used by field officer team when gaining consent (which summarised the project terms and conditions).

5.5.4 Welcome document

A welcome document with a £10 voucher and a copy of the project terms and conditions was produced to be sent out to customers as they signed up to the project. Different versions were produced for the intervention and control group.

The effectiveness of these materials is discussed in section 8.4.3 - Recruitment materials and communication.

5.6 Installation

Figure 14 overleaf shows the equipment that was installed as part of the project.

British Gas installed smart meters with Smart Energy Displays into all credit and prepayment intervention group customer properties, and credit smart meters without Smart Energy Display into credit control group households. Prepayment control group households have had a Navetas loop monitor installed by British Gas's subcontractor, PassivSystems.

As a result, the majority of participants have received two install visits, one from British Gas (for the smart meter install) and another from Passiv (for the temperature monitoring equipment), plus a third visit from the customer field officers to carry out an energy survey (all participants) and deliver the energy efficiency devices (the Intervention group). It had been hoped that these visits could all happen at the same time, but this proved to be impossible to organise due to resourcing plus the different amounts of time required at the property by different installers.

Figure 14: Equipment provided to participants

6 Recruitment and engagement approach – trial 2

6.1 Trial 2 offer

Trial 2 focuses on Demand Side Response (DSR) and is referred to below as the DSR trial. DSR involves customers being encouraged to lower or shift their electricity use at certain times through various methods (e.g. financial incentives). Under trial 2, a different ToU tariff has been offered to participants who pay for their electricity through a credit meter and those who have a prepayment meter. Trial 2 participants were recruited from existing **energy**wise participants.

6.1.1 Prepayment customers – Bonus Time

Prepayment customers have been offered Bonus Time, a dynamic non-punitive ToU tariff with a Critical Peak Rebate structure with notifications provided via SMS (plus email upon request). Under this Critical Peak Rebate programme, customers who reduce/shift electricity consumption during predefined periods (DSR events) will be rewarded with monetary rebates. The price for electricity during these periods remains the same but the customer is rewarded for any reduction in consumption relative to the electricity consumption recorded in previous 'equivalent days'. Specifically, they will be credited 10 units back for every unit of energy they save within the Bonus Time period (see Figure 15).

Figure 15: Bonus Time

6.1.2 Credit customers – Home Energy Free Time

Credit customers have been offered a static free time ToU tariff. This non-punitive tariff offered the smart credit metered customers the choice to decide whether they wanted to receive free electricity on Saturdays or Sundays between 09:00-17:00 (Figure 16). Compared to the HomeEnergy FreeTime offers commercially available, the tariff will not have exit fees, will be available also to customers that are on paper billing and to those who are supplied gas by another supplier to ensure that all the **energy**wise participants can benefit from it.

Figure 16: Home Energy Free Time tariff

Prior to the start of trial 2, all active participants were invited to take part in trial 2 by either:

- agreeing to receive Bonus Time notifications (prepayment customers); or
- agreeing to switch to the HomeEnergy FreeTime tariff (credit customers).

Customers not wishing to do this remained **energy**wise participants (provided they either already had or agreed to have a smart meter installed), but they were not participating in the Demand Side Response trial.

6.1.3 Control group customers

Control group customers received the following either just prior to or post trial 2 recruitment as per the research trial design described in Section 3.3:

- their energy efficiency devices, delivery of these commenced just prior to trial 2 recruitment;
- their smart meter and Smart Energy Monitor which was provided soon after they had signed up to take part in trial 2.
- energy efficiency advice; this was split into two documents, with advice about the devices being provided when those devices were delivered and advice about the Smart Energy Monitor provided after that device had been installed.

6.2 Timeline

The recruitment for trial 2 (DSR trial) commenced in December 2016 and was completed in March 2017. It included the following phases:

- warm up marketing;
- testing of communication materials;
- recruitment by British Gas and Bromley by Bow Centre;

- installation and advice for control group participants; and
- shifting advice just prior to trial 2 commencing.

The full timeline is presented in Figure 17.

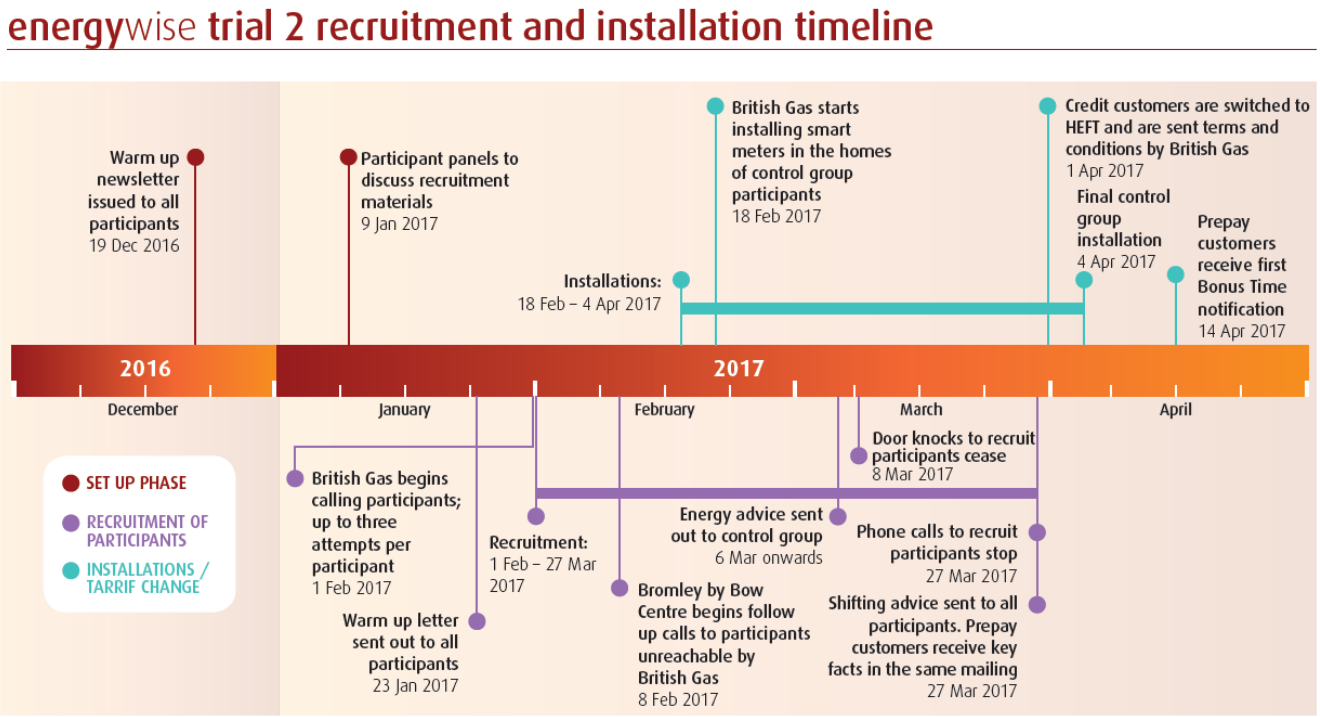


Figure 17: trial 2 recruitment and installation timeline

6.3 Recruitment approach

A recruitment strategy for trial 2 was developed, incorporating learnings from trial 1 recruitment including:

- streamlining the installation process to reduce the number of customer interactions; this was implemented part way through trial 1 installations and continued throughout trial 2 recruitment and installations;
- increased operational management of the trial 2 installation phase to enable daily sharing of information between the installation and recruitment partners;
- an improved process for liaising with housing providers to ensure access to meters at install appointments; and
- offering extra Saturday appointments to enable installations to be completed within a relatively short period of time.

In accordance with the project's Communications Plan, key aspects of the recruitment were led by British Gas. Consent being captured from the energy supplier was a preferable option because trial 2 involved participants either:

- consenting to switch to a new British Gas tariff (credit customers); or
- consenting to receive notifications that could result in them receiving credits onto their meter from British Gas.

However, extensive support was also provided from the customer field officer team in terms of issuing communications and in following up with participants whom British Gas had been unable to get hold of. Weekly and daily phone calls involving staff from Bromley by Bow Centre and British Gas were established to ensure both

parties were fully up to date with progress on individual participants. The recruitment strategy was refined throughout the trial 2 recruitment periods, based on suggestions made by key partners during weekly and daily phone calls.

6.3.1 Warm up marketing

Prior to the start of the recruitment phone calls, some 'warm-up' marketing was carried out with the objective of increasing the likelihood of participants being receptive to taking part in trial 2. This comprised:

- An article in the **energy**wise newsletter, which was issued to all active participants just before Christmas 2016 (a couple of weeks before the warm up letter referred to below was sent).
- A warm up letter (tailored by meter type) which was sent out from the **energy**wise field officer team in early January, briefly introducing trial 2 and explaining that participants would will be called by British Gas. (There was no requirement from participants to respond to this letter.)

Prior to the warm up letter going out, training was provided for the field officer team on the DSR offers – what they comprised, the potential benefits to participants of taking part and the detail of how they would work. A document listing frequently asked questions and appropriate responses was also produced. This document and the training were provided by British Gas (credit tariff) and University College London (prepayment tariff).

6.3.2 Obtaining consent for a new tariff

To take part in the DSR trial, credit customers had to provide consent to switching to the HomeEnergy FreeTime tariff and prepayment customers had to provide consent to receiving the Bonus Time notifications.

The process for obtaining consent was as follows:

- British Gas phoned all participants up to three times;
- if they could not get through, the customer field officers then tried to contact participants firstly by phone and then, for those that were hardest to reach, through door knocking;
- in the case of prepayment customers the customer field officers could sign them up to trial 2 directly;
- for credit customers, the customer field officers would arrange an appointment for British Gas to call the customer back to obtain consent.

Initially, it was planned that all participants would need to provide consent to British Gas. However, on reflection and after discussion, it was agreed that prepayment customers could provide consent to either British Gas or to the customer field officers, as they did not require a change to their tariff. This helped to streamline the recruitment process for prepayment customers.

In addition, control group customers needed an installation appointment from British Gas to have their smart meter installed and/or smart energy display provided. Where British Gas obtained trial 2 consent from a control group participant, an appointment was also booked in as part of this call. As a result of the weekly calls, it was agreed that British Gas would provide options for installation appointments to the customer field officers so that they could directly book installation appointments in with the prepayment control customers where relevant.

6.4 Communication materials

Once participants consented to taking part in trial 2, they were sent a Welcome Document (Figure 18) and a £10 Love2Shop voucher as a thank you for their ongoing involvement in the project.

Figure 18: Trial 2 welcome document

To help keep participants engaged between consenting to trial 2 and the commencement of trial 2, a newsletter was sent out in early March to all participants (Figure 19). This included details of how trial 2 would work and the benefits of taking part. This also designed to encourage those who had not already signed up to the trial to do so.

Participants who said no to taking part in trial two or who were uncontactable after all contact attempts (comprising three British Gas phone calls, three customer field officer phone calls and three customer field officer door knocks) were sent a letter explaining that they are still in the trial and inviting them to get in touch if they would like to take part in trial 2. This resulted in one additional participant sign-up. Those who are in the control group have been offered their smart meter and Smart Energy Monitor.


energywise March 2017

Welcome to the energywise newsletter

Thank you for your ongoing contribution to the energywise project. We are at a very exciting stage of the project: the beginning of our innovative energy shifting trial! This is the second and final trial of the project. We are set to start on 1st April 2017. The team have been working towards this deadline, creating new and exciting opportunities for all participants.

In this newsletter you'll find information on the trial, some survey results and the chance to get a £10 voucher by participating in a research interview.

Thank you very much for taking part in the energywise project, we look forward to taking this exciting next step with you.

Home Energy Free Time for energywise

British Gas have offered their Home Energy Free Time tariff to energywise participants.

For those of you who have said yes, you will start on this tariff on 1st April. This means that on your chosen day (either Saturday or Sunday) you will get **free electricity** from 9am-5pm.

There's still time to join!

You can't lose by taking part. This is an opportunity to get free electricity and you won't pay any more for your electricity outside of the free period.

If you haven't said yes, but would like to take part, just contact the field officer team on:

0800 678 3337 (free phone)

020 8709 9712

Remember gas is not part of the energywise trial 2.

Why shift electricity use?

energywise trial 2 lets us learn if people are able to shift their electricity use throughout the week.

Most electricity gets used on weekday evenings. This can cause congestion. We are offering free electricity at the weekend to see if energywise participants can shift some of their electricity use to their chosen day (9am – 5pm on Saturday or Sunday). This might reduce congestion.

Smart meters make it possible to have new types of tariffs that charge people less at off peak times.

This is why British Gas have offered all energywise bill payers the chance to sign up to this tariff and help us learn about electricity shifting.

How will the findings from the energy shifting trial be used?

energywise is about understanding how smart meters can help people manage their electricity use and electricity costs.

We will summarise the results in reports always in anonymous form.

UK Power Networks and other electricity network operators will use the final results to understand how best to support customers to manage their electricity bills.

Remember gas is not part of the energywise trial 2

Figure 19: March 2017 newsletter

6.5 Installation

Before the start of trial 2, British Gas visited control group customers who had signed up to trial 2 to complete all smart meter installations. To facilitate access to all properties, and building on the lessons learned from trial 1 installations:

- The social landlord partners provided a list of properties requiring Gerder keys (to open the cage or metal obstruction, known as Gerder, locking some meters) against the list of trial 2 control group participants;
- When jobs were booked with the customer, landlords were notified of this at least 72 hours in advance so they could arrange for the caretaker visit for same time;
- For prepayment customers (who could provide their trial 2 consent to the field officers rather than British Gas), British Gas provided the customer field officer team with possible installation appointments, so that when the field officers talked to a participant to obtain consent to take part in trial 2, they could book in an installation appointment at the same time.
- Customers were made aware of the installation and why it is happening; this was explained to them over the phone when they gave verbal consent to switch to the tariff and their appointment date is booked. They also received written confirmation from British Gas about the appointment and what to except, as per the standard British Gas customer journey for smart meter installations.

7 Ongoing engagement

Retention of trial participants is key to the robustness of the project findings. There is an ongoing programme of participant communication designed to keep participants engaged in the project and to minimise dropout rates. This is a combination of activities that were planned from the outset, and which were outlined in the project's communications strategy (such as the participant panels and project newsletter) and activities that were introduced to mitigate any risks that were identified.

7.1 Strategy purpose

Part of the project's communications strategy focuses on the ongoing engagement of participants throughout the duration of the **energy**wise project. The purpose is therefore to engage with customers in a way that will minimise dropout rates, whilst also improving participants' experience of the project and maximising their uptake of the energy efficiency and shifting interventions. This section outlines the different elements of ongoing engagement with project participants following their recruitment.

7.2 Panel meetings

Two participant panels have been established, one for each group (trial 1) or each meter type (trial 2), which will meet regularly over the course of the project. The purpose of these panels is to provide a structure for participant feedback and a sounding board for participant views. Each panel has had 6-8 participants.

Membership is open to all **energy**wise participants, with information on applying to join the panels contained in the welcome pack. In addition, the project team actively targeted at recruitment at selected participants to ensure that the membership generally reflects the geographical spread and demographic makeup of the research participants as a whole. Participants are offered £30 in vouchers for each panel attended, as a thank you for their time. (It should be noted that there may have been a recruitment bias in the panel members in that the field officers focused on recruiting people whose 'customer journey' hadn't been too problematic.) Each panel is attended to have around 6-8 participants; for the inaugural panel meeting in March 2016, there were six participants at each panel.

Panel meetings were initially run by facilitators from CAG Consultants, with this role being successfully handed over (following appropriate training) in early 2017 to the CFO Manager at the Bromley by Bow Centre. The **energy**wise CFO team organises and attends the meetings. A researcher from University College London observes, takes notes, and reports participant feedback and actions required from the wider project team.

The inaugural panel meeting (Panel 1) held in March 2016. Since then, a further five panels have been held and will continue to be held every three months until the end of the project.

7.3 Newsletters

Regular newsletters are sent to all participants with different versions for different groups. The purpose is to keep participants informed about project progress and to provide additional information identified by the participant panels as being beneficial to participants:

- **September 2016**; one version for the intervention group and another for the control group. The purpose of the newsletter was to keep participants informed about project progress. A draft version of the newsletter (which had originally been designed as a single version suitable for both groups) was presented at the participant panels held in July 2016. Based on feedback received at these panels, it was agreed that a separate version of the newsletter would be produced for each group. The content was amended as per the panel members' suggestions:

- control panel members felt very strongly that they should be given a firm deadline by which their devices would be delivered. The revised newsletter for this group therefore focused on the message that devices would be delivered by Christmas at the latest; and
- intervention panel members were keen to see some information about how to use their devices included in the newsletter. The revised newsletter therefore included information about how to use the standby shutdown as well as a link to an interactive tutorial about using the Smart Energy Monitor.

- **December 2016**; four versions were produced: control group credit, control group prepayment, intervention credit (Figure 20) and intervention prepayment. This newsletter included an introductory article introducing trial 2 (tailored by meter type) plus details of Bromley by Bow Centre's Christmas closure. The intervention group's version also included advice about using the smart energy display, while the control group's version included advice about using the standby shutdown plug (as most of the control group had received their energy efficiency devices by this date).
- **March 2017**; tailored by meter type; this newsletter focused on providing information on how trial 2 would work and encouraging those who had not already consented to taking part in trial 2 to do so.
- **June 2017**; also tailored by meter type; this newsletter focused on providing overall energy saving figures from trial 1 and some participant feedback on experiences to-date with trial 2.

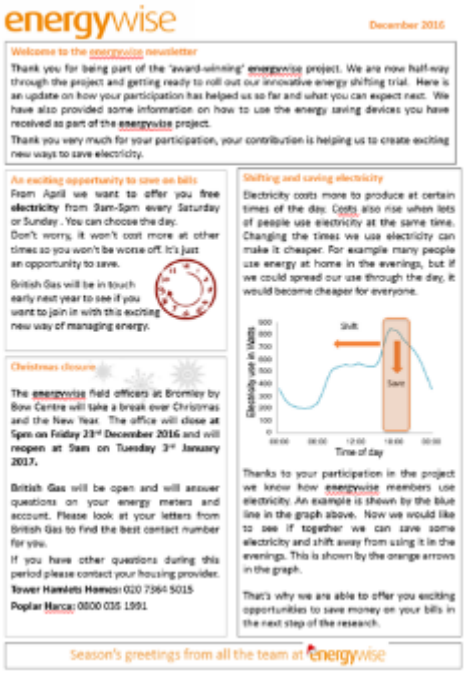

energywise
December 2016
Welcome to the energywise newsletter
Thank you for being part of the 'award-winning' energywise project. We are now half-way through the project and getting ready to roll out our innovative energy shifting trial. Here is an update on how your participation has helped us so far and what you can expect next. We have also provided some information on how to use the energy saving devices you have received as part of the energywise project.
Thank you very much for your participation, your contribution is helping us to create exciting new ways to save electricity.
An exciting opportunity to save on bills
From April we want to offer you free electricity from 9am-5pm every Saturday or Sunday. You can choose the day.
Don't worry, it won't cost more at other times so you won't be worse off. It's just an opportunity to save.
British Gas will be in touch early next year to see if you want to join in with this exciting new way of managing energy.
Shifting and saving electricity
Electricity costs more to produce at certain times of the day. Costs also rise when lots of people use electricity at the same time. Changing the times we use electricity can make it cheaper. For example many people use energy at home in the evenings, but if we could spread our use through the day, it would become cheaper for everyone.
Shift
Save
Electricity use in Watts
Time of day
Thanks to your participation in the project we know how energywise members use electricity. An example is shown by the blue line in the graph above. Now we would like to see if together we can save some electricity and shift away from using it in the evenings. This is shown by the orange arrows in the graph.
That's why we are able to offer you exciting opportunities to save money on your bills in the next step of the research.
Christmas closure
The energywise field officers at Bromley by Bow Centre will take a break over Christmas and the New Year. The office will close at 5pm on Friday 23rd December 2016 and will reopen at 9am on Tuesday 3rd January 2017.
British Gas will be open and will answer questions on your energy meters and account. Please look at your letters from British Gas to find the best contact number for you.
If you have other questions during this period please contact your housing provider.
Tower Hamlets Homes: 020 7364 5015
Poplar Harca: 0800 035 1991
Season's greetings from all the team at energywise

Figure 20: December newsletter for credit participants

7.4 Mitigation of risks

Temperature monitoring equipment was installed in participants' homes as part of the **energy**wise project's commitment customer protection. However, this equipment caused more disruption for some participants than was initially anticipated, with some households requiring repeat visits to correct signal problems or to re-fix equipment to the wall. (These problems were caused by a mixture of technical issues and participant behaviour.) As a result, some participants expressed their frustration with this process and asked to leave the project.

In addition, it was identified in spring 2016 that those participants who were recruited to the project as part of the pilot had not had any communication from the project for some months. Two actions were taken to mitigate this risk, as described below.

7.4.1 'Thank you' letter for staying in the project

Partners agreed that a thank you letter should be sent to all active participants together with a £10 voucher (May 2016). This letter was both in response to the disruption from the temperature monitoring equipment and also in response to the fact that those participants who were first to be recruited onto the project had not had any contact from the project for several months.

7.4.2 Consent forms to opt-out from temperature monitoring equipment

UK Power Networks developed a detailed protocol to follow with those participants that want to leave the project due to the temperature monitoring equipment. The retention process consists of offering them the opportunity to remain within the project without the requirement of having the temperature monitoring equipment. This option was not offered proactively, but only in response to participants clearly stating that the reason for dropping out is that they do not want the temperature monitoring system. (This was to avoid participants being encouraged to opt-out from the sensors.) The customer field officer team conducting the retention process also made it clear that the specific circumstances had been evaluated case-by-case and this opportunity has been offered specifically to that householder. Bromley by Bow Centre was responsible for capturing the participant's consent

and storing the consent forms securely for the duration of the project. Thirteen participants have chosen to take up this offer as of 10 August 2017.

It was agreed that after the second round of corrective action, no further attempts would be made to fix any further problems with the temperature monitoring equipment.

7.5 Postcards

In early November 2016, postcards were sent to all participants to tell them about the delivery of devices (Figure 21), as follows:

- the control group were informed that they would be receiving their energy efficiency devices – four LED lightbulbs, standby shutdown and eco-kettle – before Christmas and were invited to get in touch with the field officer team to arrange delivery (see Figure 21); and
- the intervention group were informed that they were entitled to receive an additional LED lightbulb and were therefore invited to get in touch to arrange delivery[13].

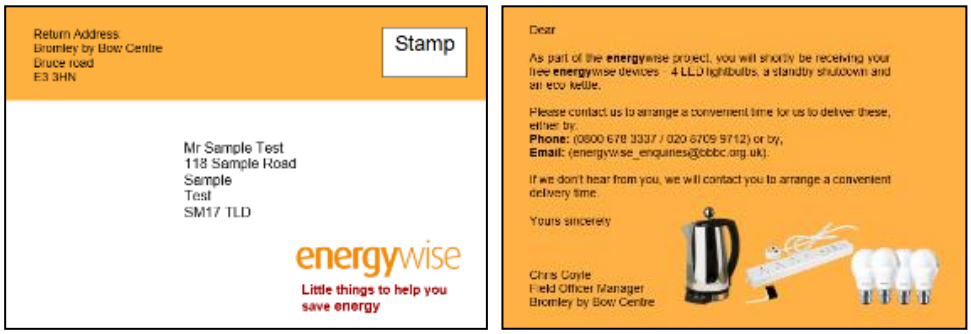


Figure 21: Postcard for control group informing them about the energy efficiency device delivery

7.6 Engagement plans to the end of the project

The following programme of engagement is planned up to the end of the project. All participants will receive the following:

- quarterly project newsletters (tailored by meter type);
- invitations to take part in the participant panel meetings (planned for October 2017, December 2017 and March 2018);
- an invitation to attend an end of project thank you event (with different events held for prepayment and credit participants);
- communication regarding the end of project disengagement. This will include:
  - a letter explaining that the project is coming to an end and contact about arranging to decommission the **energy**wise equipment;
  - a phone call from British Gas to discuss which would be the best tariff for the customer going forwards.

Prepayment participants will also receive ongoing notifications about Bonus Time periods and a quarterly statement from UCL outlining the rebates they have earned. Selected participants will be invited to take part in research led by UCL, including phase to phase interviews to better understand their response to the ToU tariff.

8 Efficacy of different engagement activities

8.1 Summary of achievements

Figure 22 provides a summary of the trial 1 recruitment achievements while Table 3 provides figures on the number of participants still active in the project (as of 10 August 2017).

[13] The intervention group, who each received three LED lightbulbs in trial 1, were offered an additional LED lightbulb at the start of trial 2 to comply with the project Terms and Concisions which stated they would be offered additional devices in trial 2. The control group received four LED lightbulbs as part of the packages of devices so that both groups received the same amount overall.

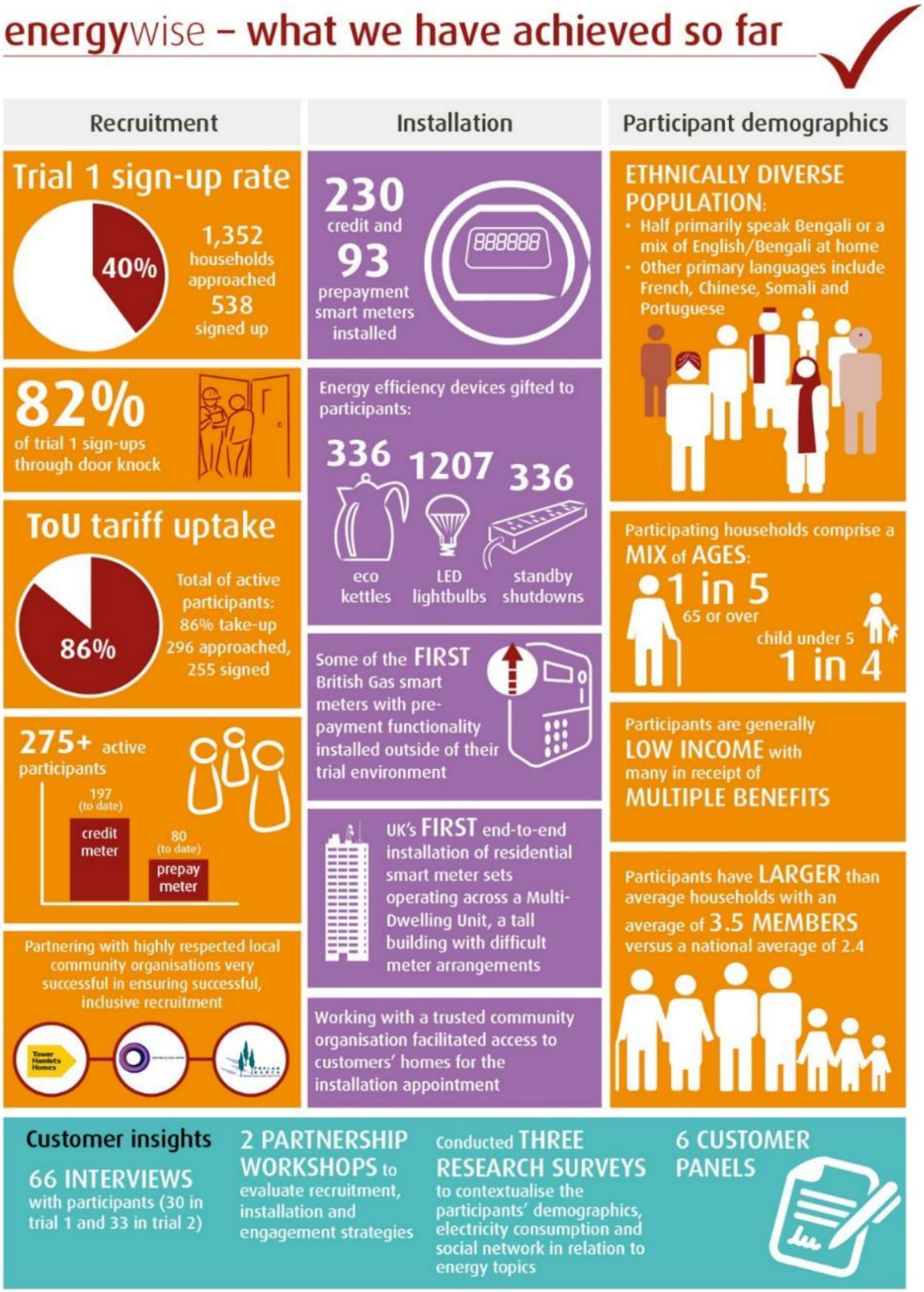


Figure 22: energywise achievements

Table 3: Active participants as of 10 August 2017

	A	B	C	D	E	F	L
	Approached	Signed up	Declined	Undecided	Drop-outs	Active participants	Active participants in DSR trial
TOTAL	**1352**	**538**	**582**	**232**	**262**	**276**	**239**
CR	-	329	-	-	132	197	167
PP	-	209	-	-	130	79	72
PH	-	93	-	-	52	41	37
THH	-	445	-	-	210	235	202
Intervention	-	273	-	-	117	156	131
Control	-	265	-	-	145	120	108

CR – Credit customers, PP – Prepayment customers

PH – Poplar HARCA tenants, THH – Tower Hamlets Homes tenants

Because of the area targeted, the majority of **energy**wise participants are Bangladeshi (154 households out of 278 Home Energy Survey respondents), with White British comprising a much smaller proportion (58 out of 278). This is not a reflection of the project's eligibility criteria (which do not include anything on ethnicity). Participants reflect the demographic diversity of the local area, with other ethnicities (including French, Chinese, Somali and Portugese) also represented. Participating households comprise a mix of ages (one in five has an occupant aged 65 or over and one in four has a child under 45). Participants have larger than average households with an average of 3.5 members versus a national average of 2.4. A full demographic analysis of participants can be found in the project's Final Energy Saving Trial report[14]. This is reflected in the primary language spoken at home, being mainly English, Bengali or a combination of the two. Bangladeshi households, along with other Black or Minority Ethnic households, are considered hard to reach, due largely to the lack of English as a first language in many households.

In total, 86% of active participants said yes to the tariffs offered before trial 2, with numbers broadly the same for both the credit and prepayment DSR offers.

Of the 276 active participants (as of 10 August 2017), all have had their smart meter/smart energy display installation either in trial 1 or in trial 2. Of the additional 79 households that have received an installation in trial 1:

- 35 changed supplier;
- 18 moved home (change of tenancy);
- 14 were disengaged by the project (due to project decision in trial 2, including 12 exhausted/non contactable and 2 technical issues);
- 12 requested to drop out.

8.2 Approach to evaluating recruitment and engagement of participants

Following the completion of recruitment of **energy**wise participants and the installation of all equipment before trial 1, an evaluation was undertaken of the recruitment and installation processes. Evaluation activity ran from March – May 2016. A second evaluation exercise was undertaken following completion of recruitment of participants to trial 2.

The objectives of each exercise were to identify:

- what had worked well and what hadn't worked well in terms of recruiting **energy**wise participants; and
- lessons that could be used to inform future projects as well as the ongoing running of the **energy**wise project.

[14] Available at http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/.

The evaluation comprised the following activities:

- analysis of project data on recruitment and installation, including an analysis of the project recruitment tracker database (see Appendix A); this was carried out in April-May 2016.
- participant panel meetings:
    - for the initial recruitment and group 1 installations – one with intervention group and another with control group participants (in March 2016) – to discuss views on the recruitment and installation process. Six participants attended each meeting.
    - for trial 2 – one with the prepayment group and one with the credit group (in April 2017) – to discuss views on the recruitment and installation process relating to trial 2. 12 participants attended the credit meeting and five attended the prepayment meeting.
    - those attending the meetings were given a £30 voucher as a thank you for their time. Membership of the panels was open to all, but the customer field officers focused their recruitment activities on those customers who had expressed interest in having additional engagement with the project and on those whose customer journey had been largely positive, as it was felt these customers would be most likely to participate. There is therefore some recruitment bias in terms of the panel members. The March 2016 panels were facilitated by CAG Consultants (with the CFO team in attendance) whilst the April 2017 panels were facilitated by the CFO manager (following training and a handover from CAG Consultants). All meetings were attended by University College London (who took notes).
- staff from CAG Consultants conducted semi-structured telephone interviews with:
    - for the initial recruitment evaluation; 30 randomly selected participants, providing a broadly representative split between the control and intervention group and between those who signed up after door knocking and those who signed up following a phone call (carried out in April 2016).
    - for the trial 2 evaluation; 25 randomly selected participants, providing a broadly representative split between meter type as well as group (carried out in April 2017).
    - (interviewees were given a £10 voucher as a thank you for their time.) Please note there is a degree of recruitment bias in terms of these interviews: on the advice of the customer field officer team, CAG Consultants did not approach certain participants who had indicated that they would rather not be contacted, or who had raised an issue that was yet to be dealt with (such as requesting the removal of their temperature logging equipment). Also participants who were known to speak little or no English were not approached. These interviews were carried out in April 2016.
- workshops with partners and recruiters, as follows:
    - for the initial recruitment evaluation, an interactive and very productive two-day workshop, was held in May 2016 at the Bromley by Bow Centre (Figure 23), with project partners, Bromley by Bow Centre staff and recruiters, to gather feedback on the recruitment, installation and engagement processes. Partnership working is a key element of this project; Figure 23 shows some of the 26 attendees interacting at one of the workshop's plenary sessions. The workshop was attended by representatives from the following **energy**wise partners: UK Power Networks, British Gas, Bromley by Bow Centre, University College London, CAG Consultants, Tower Hamlets Homes, PassivSystems plus the specialist recruitment organisations Groundwork and Sustainable Home Energy Survey. (Poplar HARCA's representative was unable to attend, but provided input to the draft workshop report.) The workshop was facilitated by staff from CAG Consultants.
    - for trial 2 recruitment evaluation, a single day workshop was held in May 2017with representatives from UK Power Networks, Bromley by Bow Centre, University College London, British Gas and CAG Consultants.

Figure 23: Trial 1 recruitment evaluation workshop

8.3 Trial 1 recruitment and installation evaluation

8.3.1 Identification of eligible participants

Those partners involved in the selection criteria process took part in a session at the evaluation workshop to identify what went well and how this process could have been improved. Partners concluded that project had successfully made use of proxies can to identify fuel poor customers such as social housing tenants living in lower efficiency homes in areas of high deprivation, since public data on income and fuel bills is not available;

Partners identified the following learning points:

- minimise exclusion criteria to maintain the biggest possible pool of potential participants. (Restricting participants to tenants of two social housing providers limited the number of households that could be approached.)
- issue clear expectations to partners at the project outset about the data required and the format of this to reduce the number of iterations required.
- if using EPC data, consider purchasing this rather than requiring partners to supply it, as they may not have it in an easily accessible format.
- allow for high numbers of dropouts after sign-up. For long-duration projects, take into account that people may change supplier or move house.

8.3.2 Trial 1 recruitment results

Figure 24 summarises the recruitment achievements for trial 1. In total, 40% of households approached signed up, exceeding the 33% target. Of those signing up to the project, only 3% of participants signed up on receipt of the initial invitation letter. The vast majority (82%[15]) signed up after receiving a door knock from the customer field officer team, with a further 14% signing up over the phone. Only three signed up after requesting a pre-arranged home visit, and none signed up at the drop-in event (which, despite extensive promotion, nobody attended).

[15] This figure is the same as the one reported to Ofgem in the June 2016 and December 2016 Six-monthly reports. However, the lessons learnt in the SDRC 9.3 report and in the Final Energy Saving Trial report were erroneously reporting 79% instead of 82%. The SDRC 9.3 and Final Energy Saving Trial reports are not addressing customer recruitment and engagement directly; the SDRC 9.4 report reporting the validated figure of 82% is the reference document for customer engagement for the project.

-

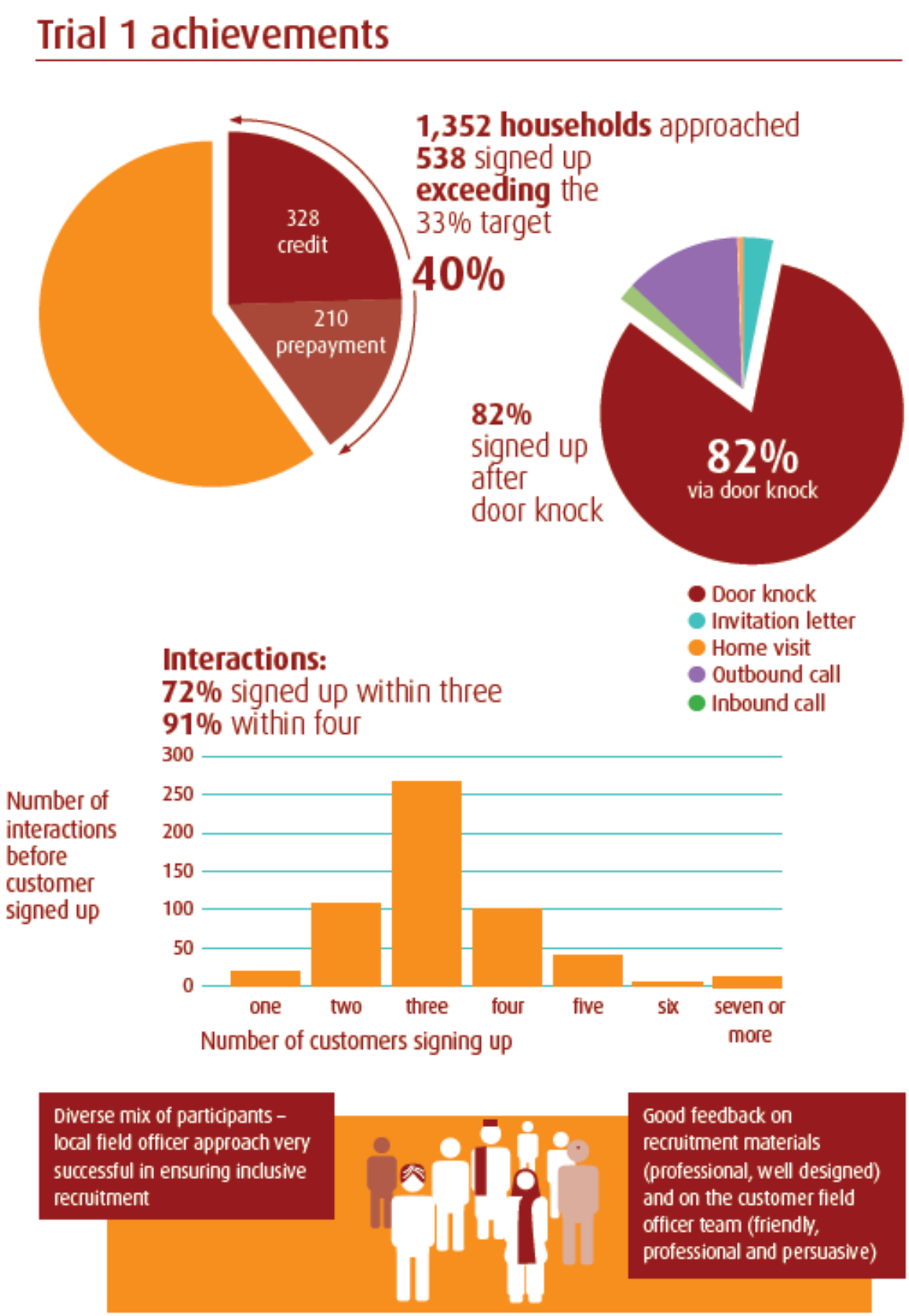


Figure 24: Trial 1 recruitment results

(These figures include 10 households in one particular Multiple Dwelling Unit, who were approached in March-April 2016, after the main recruitment had ended, of whom two opted to take part. The recruitment of these additional MDU took a slightly different approach to that of the main recruitment, and was intended to ensure a higher number of MDU participants than had originally been secured. It is therefore not included in the recruitment evaluation presented below.)

The bar chart in Figure 24 above shows how many interactions (i.e. receipt of letter plus conversations with the customer field officer team, either over the phone or at their door-step) participants had with the customer field officer team before they agreed to signup. Those listed as signing up after 'one' interaction are customers who signed up immediately after receiving the invitation letter (either by signing up on the project website or by calling up the customer field officer team). The letter and reminder letter are counted as one interaction. 72% of participants signed up within three interactions, with 91% signing up within four interactions. However, there were eleven participants who signed up after seven, eight or nine interactions.

Figure 25 indicates the number of households targeted and the number signing up at each door knock (or attempted door-knock; where customers did not answer the door, a 'sorry we missed you' card was usually left and an attempt was made on a different day/different time). Whist initially the percentage of customers signing up reduced (from 16% at the first door knock to 10% at the second door knock and 8% at the third), some of the later door knocks elicited good results; the eighth door knock targeted just 17 households, of which four signed up (24% response rate). Similarly, for those signing up via out-bound phone calls, 78% of sign-ups through this method.

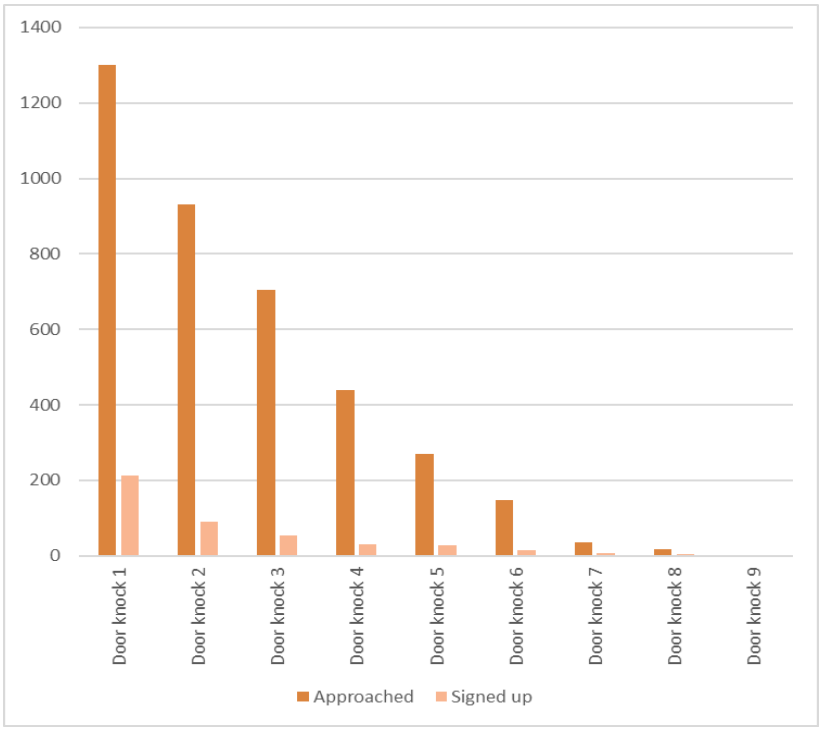
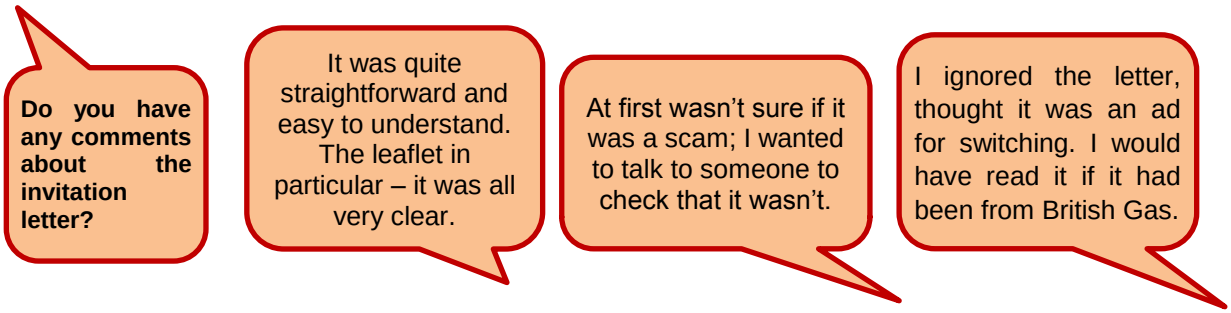


Figure 25: Sign-ups via door knocks

8.3.3 Recruitment materials

8.3.3.1 Invitation letter and leaflet

Just over half of the active participants interviewed as part of the evaluation recalled receiving the **energy**wise invitation letter and leaflet. These participants felt that this letter was important in making them aware of the project and the fact that they had been selected to participate. Some suggested that clearer, less technical language could have been used (e.g. avoid words like 'devices'). Several thought the letter was about switching energy provider and threw it away; these participants said that if it had been clear from the letter and envelope that British Gas was involved, they would have looked at it. This view was shared by some of the panel participants.



A minority said that the letter had little or no influence on their decision to take part.

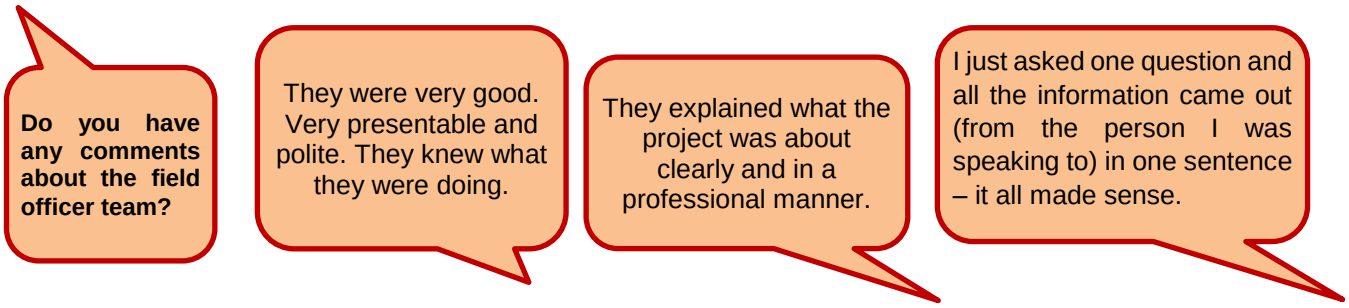
> *"I wouldn't have chosen take part just on the letter; I needed to speak to someone too."*

Similarly, participant panel members generally felt that the invitation letter was recognised as necessary to make people aware of the project and the fact that they had been selected to participate. The explanation of the project by the customer field officer was considered by panel members to be key to understanding the project and joining, and panel members were very positive about the customer field officer team.

Project partners and recruiters felt that the recruitment materials were well designed, and having the housing provider's logo on the envelope worked well. However, they recognised that some participants felt that the branding was too corporate, and that many customers assumed the letter was from another energy supplier.

8.3.3.2 Door knocking and phone call

The majority of participants interviewed said that the explanation of the project by the customer field officer/recruiter, either at their door knocking visit or over the phone, was key to understanding the project and joining, and participants were very positive about the customer field officer team and the recruiters, whom they reported to be enthusiastic and well informed. The fact that the customer field officers were not forceful in their approach and their ability to simply explain the benefits worked well and was also praised. Participants said they liked mixed gender recruitment teams.



Participant panel members were similarly very positive about the customer field officer team, reporting that the enthusiastic and well informed team of customer field officers was key to them signing up.

> *"I wasn't sure of the offer when I read the letter, and had never heard of **energy**wise, but an amazing lady came and explained in detail the process and that it would fit around my schedule. I'd never go back."*

Project partners and recruiters agreed that door knocking was generally successful and that having a locally based, diverse team with locally relevant language skills was particularly effective. However, they recognised that there were various challenges to the door knocking, including the logistics of planning visits to disparate addresses and facing the barrier of intercom systems. In addition, information on customers to approach came through to the recruiting partner in batches and delays in getting the full list meant there was a narrow window

within which to recruit customers. (This had not been the original intention; it was originally planned to provide the full list at the start of the recruitment process. However, the selection of eligible customers required several iterations to reach the required number and therefore a multi-stage approach was taken.) This required the project to bring on additional recruiters who inevitably had less training on the project and processes than the Bromley by Bow Centre customer field officers. Whilst these recruiters were effective in getting customers to sign-up, questions were raised about whether some of the accuracy of project messaging was lost. Partners also felt that the use of uniforms for Bromley by Bow Centre would have increased levels of trust and access within the community; this is something that was considered at the outset of the project but, based on the advice from the social rese arch organisation that provided engagement and research training to the CFOs, it had been decided not to use uniforms, but simply ID badges.

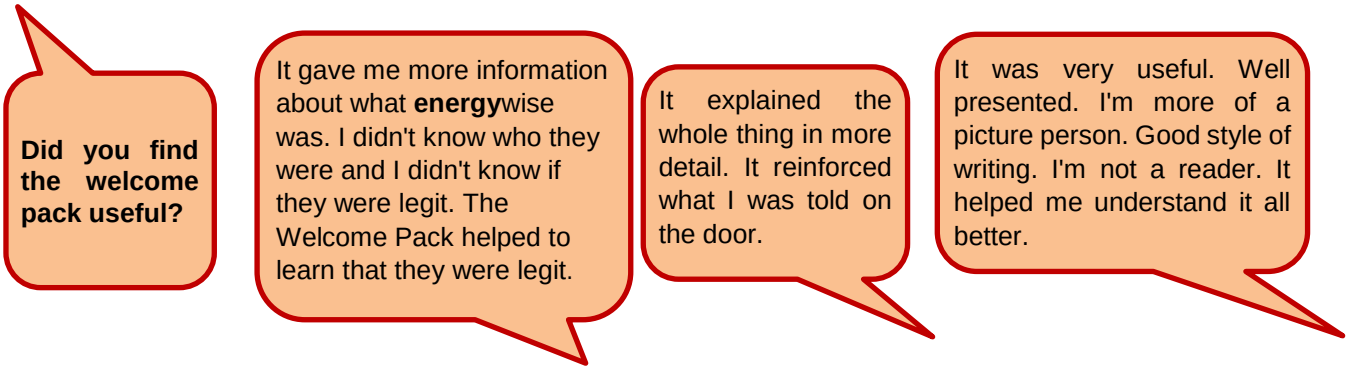
8.3.3.3 The welcome pack

The vast majority of the 30 participants interviewed recalled receiving their welcome pack and most of these had looked at and read at least parts of the welcome pack. Of these, 15 reported that they had not read the entire document or had only skimmed through it; a small minority suggested they had not looked at it at all.

> *"I went through when I received it but found it a bit much."*

> *"I glanced at it but did not really pay it that much attention."*

More than half of those communicated with said that they found the welcome pack useful or very useful; those that gave further detail suggested that it had served as a helpful reference and/or provided useful additional detail to that provided via the leaflet or visits. One noted that as a result of what they had read they had made some changes to their behaviours – e.g. switching equipment off rather than leaving it on standby.



There were some suggestions that the welcome pack, or other project literature, could have been clearer about what equipment would be installed, by whom, and how long this would take.

8.3.3.4 Drop-in event

Despite extensive marketing (with cards advertising the drop-in event being distributed to 80 potential participants living within a mile of the chosen venue), no-one attended the drop-in event (which was organised as an alternative way for participants to sign-up).

8.3.4 Additional recruitment resource and overall management

Project partners felt that, whilst the recruitment approach in general was successful and exceeded the target sign-up rate, the lack of a CFO Manager being in place for the full duration of the recruitment and installation phase (as originally planned) affected the level of efficiency of the recruitment and installation. However, Bromley by Bow Centre demonstrated a positive attitude in offering extra support to mitigate this issue with the role of interim CFO Manager being shared amongst senior managers at the Centre with support from UK Power Networks, who provided on-site management support during the key phases of recruitment.

Due to delays in scaling up the CFO resources required for the recruitment phase, a wide range of individuals became involved in the recruitment of participants, with specialist recruiter teams successfully brought in to sign-up customers. However, these recruiters inevitably had less training on the project and processes than the CFO team and questions were raised by some partners about whether some of the accuracy of the messaging was lost. Although this was not ideal, a Bromley by Bow Centre senior representative stepped in to coordinate the external recruiting agencies' activities with the internal CFO team's tasks. British Gas also provided ongoing support to enable effective collaborative working between the partners.

8.3.5 Special assistance

Only one out of the 30 interviewees reported requesting special assistance; they were hard of hearing and had had to ask project staff to speak loudly and clearly. They reported that their request was complied with and that this was helpful.

8.3.6 Trial 1 recruitment - conclusions

Key achievements

The **energy**wise recruitment strategy was based on:

- contact from a local trust organisation with an excellent understanding of the local area and languages;
- an engagement strategy and materials tailored to the target population; and
- face to face communication and support.

This approach proved to be very successful in achieving the impressive 40% sign-up rate while successfully ensuring inclusive recruitment. Around a third of participants are on prepayment meters and participants are ethnically diverse, with half speaking mostly or some Bengali at home whilst other primary languages include French, Chinese, Somali and Portuguese. One in five participating households has an occupant who is 65 or over and one in four has a child under 5. Participants are generally low income with many in receipt of multiple benefits. 82% of participants were signed up through face to face engagement, over 90% of whom signed up within four interactions.

Learnings

Having pairs of recruiters worked well, particularly when these involved a customer field officers working with a British Gas engineer, and when the pairing included a woman. Participants were generally very positive in their feedback about the customer field officer team. An initial letter followed by door knocking proved an effective way of persuading people to sign-up. Recruitment materials were generally felt to be clear and well designed.

The dropout rate was higher than expected, with many dropping out before their equipment was installed, and the recruitment approach ended up being more expensive and longer in duration than anticipated, due in part to the need to bring in extra recruiters to get participants signed up by the deadline.

From participant feedback and partner discussion, it was concluded that sign-ups could have been even higher, and the process more efficient, if:

- the full list of eligible participants to approach had been available from the outset of the recruitment phase, rather than being provided in batches. (It was originally planned that this would be the case. However, the selection of eligible customers required several iterations to reach the required number and therefore a multi-stage approach was taken);
- there had been some 'warm-up' marketing from the housing provider prior to the invitation letter being sent. This was considered, but not implemented because only certain tenants were eligible to take part and it was felt that it would potentially create feelings of exclusion amongst those not able to participate;
- the messaging in the invitation letter and leaflet had been a little simpler with less text and more illustrations, where possible, plus the energy supplier's logo clearly displayed on the envelope and letter to ensure recipients understood the project was not trying to persuade them to change suppliers. In addition, it would have been useful if the welcome pack had included clear information on what equipment would be installed and by whom.

- there had been a suitably skilled and experienced CFO Manager in place at Bromley by Bow Centre for the full recruitment phase. (A Bromley by Bow Centre senior manager stepped in to help ensure the recruitment process continued in the absence of a dedicated manager.)
- there had been a smaller team of recruiters, receiving regular refresher training, with quality assurance of the door knocking process;
- a Bromley by Bow Centre customer field officer had been paired with a British Gas engineer; this proved to be very effective in the MDU recruitment;
- a woman had been included in each pairing where possible; many participants said they felt comfortable talking about the project with a woman. It was also felt that it would have been beneficial for recruiters to stay in the same pairing throughout the recruitment phase, and to the same area, enabling them to build up a neighbourhood presence and a rapport with their target households;
- additional regular meetings had been arranged by the recruitment partner for those involved in the recruitment process to share learning and change procedures as required;
- the customer field officers had worn uniforms when undertaking door knocking activity and household visits; this may have increased levels of trust and access;
- there had been a user-friendly and efficient data tracker system set up at the outset to enable door knocking teams to be deployed as efficiently as possible, with a high level of data management skills in place at the recruiting partner to enable good data accuracy plus real-time data analysis to inform improvements to the recruitment approach. Whilst it had been the intention that this would be in place from the outset, in practice the field officers did not possess sufficient skills in data management to set this up – this is something that would usefully have been an essential requirement within their job specification. It should be noted that there was a data tracker in place from the start, but this was improved over time with the help and support partners. This process helped to up-skill the CFO team, thus adding value to the recruitment partner.

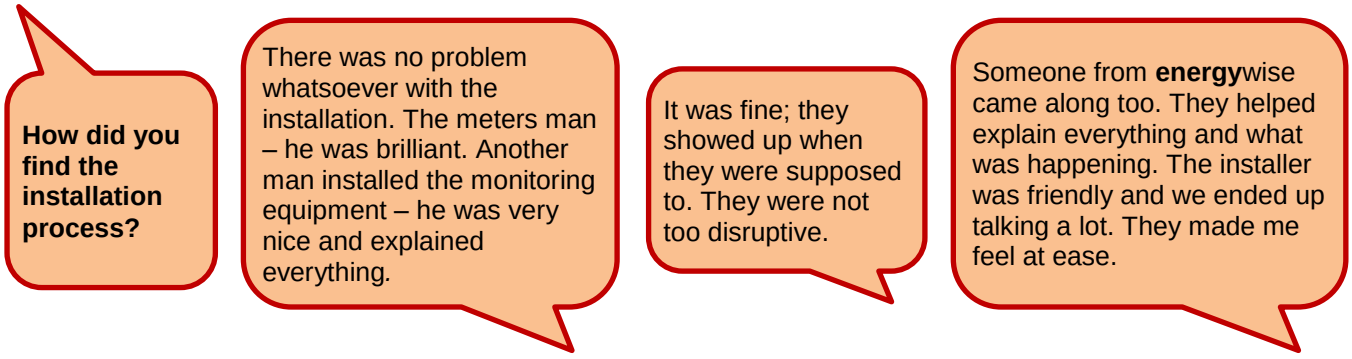
8.3.7 Installations and delivery of devices

At the start of trial 1, the average amount of time between sign-up and a complete install was 36 days for smart meters and 40 days for the temperature monitoring equipment. 92% of all intervention group smart meter customers had their equipment installed within two months of sign-up. It had been expected that the time period between sign-up and install would be much shorter than this; the main reasons for this delay were:

- delays in the development of a technical solutions for the control group prepayment customers;
- hard to reach customers; and
- aborted jobs, which was generally down to the customer not being in (or answering), the customer refusing access to the property, on the day rebooking of the appointment, or there being no access to the meter room.

The vast majority of participants interviewed were satisfied with the installation process, with ten saying they were very satisfied. Two (out of 30) said they were not satisfied. In terms of whether anything could have been improved about the installation process, more than two thirds said no.

Similarly, participant panel members felt the installers were good and were happy with their contact with them. Two (out of 12) had had problematic installs and most had had post-install visits to rectify issues such as temperature sensors falling off the wall. In general, this did not seem to have generated much ill-will. It was felt that it would be good for there to be more flexibility in how the kit could be installed in the home to work with



individual preferences and furniture position, and to accommodate the fact that some would be happy to have the sensors screwed into the wall and others wouldn't.

One interviewee commented on how helpful it was to have someone from **energy**wise come along as well as the installers.

Only three participants reported problems with the install visit, two of which were minor (e.g. the first appointment was missed, but the customer wasn't very bothered and the installer came the next time).

One customer who said they were 'very unsatisfied' with the installation reported that there were technical problems requiring the installer to be at the property all day, and then it still didn't work.

> *"I wasn't very happy. They initially came to install the meter and they couldn't connect it. The installers were there for the whole day, then they came back and it still wasn't sorted. Required multiple visits."*

Several participants had problems of one kind or another following the installation. Five participants had problems with the temperature monitoring equipment, with the equipment falling off (sometimes repeatedly).

> *"The monitoring equipment in the bedroom keeps falling off the wall. They stuck it on with one piece of Velcro and it kept falling off. I've had to go back and forth…I gave up in the end and just put it on the bookshelf."*[16]

One interviewee believed they had problems with their internet connection post-installation. However, the monitoring equipment uses only a tiny amount of data (a few KB), so could not have been the cause of this.

> *"I was surprised by how much monitoring equipment they turned up with, this is not what I was expecting… The internet (has been) very slow and I believe that this is connected to the monitoring equipment."*

One participant reported that they weren't present for the install (her husband was) so she hadn't been able to ask questions. As a result, she didn't understand how to use the equipment. The CFO team subsequently followed up with this participant to offer the required advice.

Six (out of 30) participants interviewed had suggestions for how the installation could have been improved, three of which related to the installation visit. These included turning up at the appointed time, having the right parts, and providing a better explanation of the equipment plus a follow-up call to check that everything has been understood. In fact, British Gas attempted follow-up call to all customers who had had a British Gas installation. Their protocol is to try three times. The objective of this call is to find out whether the customer was satisfied with the installation process; this is an opportunity for customers to provide feedback and ask questions on all of the equipment installed. (Prepayment customers in the control group who had their monitoring equipment installed by PassivSystems did not get a follow up call.)

Project partners felt that, overall, the installation process had run well with the following aspects of the installation process being particularly successful:

- there was good team work between the customer field officers, British Gas and PassivSystems, particularly the buddy approach (of pairing a customer field officer with a British Gas member of staff) – though it took a while to develop that;
- the booking system generally worked well;
- British Gas got very positive feedback from customers;
- working with a trusted community organisation slightly increased the success rate of appointment bookings; and
- the customer field officers successfully managed to collect research data whilst carrying out the install programme.

[16] This participant was reassured that it was fine for them to leave the equipment on the bookshelf.

However, they acknowledged that there were a number of challenging areas, in particular:

- co-ordination between partners could have been improved to reduce the number of visits customers had to have. Linked to this, there were challenges getting access to the meters which required caretakers to provide access;
- the booking system was a bit erratic and there were some problems with confirming appointments – particularly towards the end of the installation period when installs were sometimes being done with just one day's notice;
- there were problems with the temperature monitoring equipment, with equipment frequently falling off the wall or other alarms being sent to indicate the equipment was not working properly; and
- it was challenging for the CFOs to deliver the energy efficiency kit at the same time as the installation visit since they did not have a car or van.

Partners felt that the installation phase would have gone more smoothly, if:

- the installation appointments had been arranged by the energy supplier, to enable improved coordination. The role of third parties should be restricted to recruitment and engagement;
- there has been the same customer journey in place for those receiving only a PassivSystems installation as those receiving a British Gas and PassivSystems installation (appointment reminders, follow-up calls etc.);
- there had been no temperature logging equipment, which is not directly related to the scope of the project. Having a second installation organisation involved complicated the process and significantly increases the disruption for the customer. Furthermore, this equipment has to be installed in participants' bedrooms, which is more intrusive than replacing a meter which is generally in a hallway or kitchen. If this equipment is necessary, consider having the same organisation installing this as well as the smart meter, or at least brand the other organisation the same, and aim to minimise customer interactions;
- it was organised so that all those involved with installation/equipment delivery attended a customer's house at the same time where possible, to minimise disruption (though it is recognised that this is challenging given the different time and other requirements of the different groups. It would also have required a bigger team of CFOs than was in place for the project);
- there had been deeper pre-install briefings for the housing provider caretakers, to increase their understanding of the project and to increase their willingness to facilitate meter access; and
- the installation process had been piloted with a few households before the main installation phase begun (as per the recruitment process), with the process refined as necessary following this pilot.

8.3.8 Trial 1 installation – conclusions

Key achievements

- 228 credit and 66 prepayment smart meters plus 61 monitoring devices were installed in participants' homes.
- British Gas achieved a slightly higher success rates in appointment bookings than under their Business as Usual activity with the support from the local trusted organisation Bromley by Bow Centre.
- 1,044 energy efficiency devices were delivered to intervention group participants by the CFO team.
- Successful installation was achieved of some of the first Smart Metering Technical Specifications 1 compliant prepayment smart meters outside British Gas's testing environment.
- UK's first end-to-end installation of residential smart meter sets operating across a tall Multi Dwelling Unit building with difficult metering arrangements was completed (see SDRC 9.3 report for details[17]).
- Participants who are still involved in the project have generally been very positive about the installation process and were happy with the installation teams.

Learnings

Working in partnership with a trusted community organisation resulted in a slightly higher success rates in appointment booking. As a general rule, at least 48 hours' notice should be provided to caretakers of when meter access will be needed.

[17] Available from http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

162 participants either chose to dropout or were disengaged at or before the installation phase. This was due to a combination of reasons:

- 24 participants were unreachable to book an installation, meaning they had to be disengaged by the project before reaching the booking & installation phases;
- a further 32 participants were disengaged during the booking and installation phases. Of these, three refused access, nine were no longer eligible (e.g. switching supplier or moving house) and 20 were for technical reasons such as the meter being inaccessible, impaired or having too little space (12 cases), inability to establish a signal (two cases), issues with the intake cupboard (four cases), the fusebox (one case) and safety (one case).
- an additional 106 participants chose to leave the project in these early phases due to a combination of reasons concerning the equipment, project benefits and demands, and changing personal circumstances. Of these, 32 participants chose to leave because they decided they did not want a smart meter (15) or felt the project's installation process was too much of a hassle (17). The others left for a range of reasons, further details of which are provided in section 9.

Just as the recruitment process was piloted before the project was rolled out, so it would have been useful to pilot the installation process before rollout with a view to developing a process that minimises dropouts. Wherever possible, customer disruption should be minimised by co-ordinating installation and equipment delivery into one appointment. The requirement for temperature monitoring equipment to be installed as part of this project made this challenging, as a different organisation was responsible for these installations. The number of customers choosing to dropout at this stage may have been reduced if all installations were managed through one visit.

In the case of complex projects like this involving the installation of equipment by different partners, providing very clear information to participants from the outset about what will be installed, by whom and how long this will take (possibly with a video to illustrate the process) may help to further reduce dropouts.

8.3.9 Reasons for choosing to take part

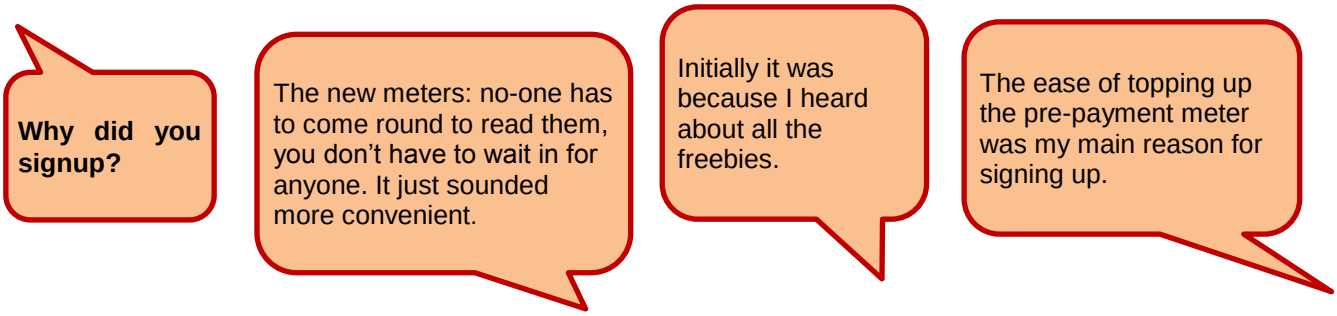
8.3.9.1 Why did participants choose to sign-up?

Participants interviewed and at the panel meeting reported that their main motivation for taking part was the potential to save money. Specifically, several (16 out of 30) participants said they were interested in identifying opportunities to reduce their energy bills.

> *"[I was] interested in the possibility of controlling and reducing bills."*

Some of the panel members also reported being motivated by the promise of vouchers, while a few said they were attracted by the feeling of being selected to take part.

A few of those interviewed (four out of 30) stated that they were interested in having better visibility of their energy use and a small number of others reported that the availability of free equipment was attractive to them. Two respondents indicated that they had agreed to participate because the project sounded 'interesting'. Other individual interests included the ease of topping up via a prepayment meter, a wish to try something different, to assist university students (they had noted the involvement of UCL) and a wish to show how a self-professed low energy user differed from the 'norm'.



Many of the interviewees did not identify a secondary reason for signing up to the project. Four expressed an interest in the free equipment with one noting that were knew they were due to receive a smart meter so they felt they 'might as well get on with it'. Other individual responses included an interest in the environment, an interest in being able to top up online, an interest in helping the pilot, a desire to save money and an interest in being able to monitor their energy use.

"Also how I would be able to top up my credit online."

"I knew we were all going to get smart meters anyway so I thought as might as well get on with it."

8.3.9.2 Why did some choose not to sign-up?

579 of 1342 (43%) invited participants were not interested in joining the **energy**wise trial.
To understand the reasons behind non-participation, a non-participation survey was designed and administered. This was a simple question asked over the phone or in person by the customer field officer at the time of refusal, or immediately after.

445 non-participation surveys were carried out (77% of total population). 16 surveys could not be carried out at the point of recruitment and 118 were not carried out due to a lack of resources during the recruitment period (Table 4: Non participation surveys). However, in four cases it has been possible to infer the reason for non-participation despite the survey not being administered, due to additional information captured about the interaction by project partners. This means 449 responses have been analysed.

Table 4: Non participation surveys

Non-participation surveys	
Conducted	445
Not conducted but inferred	4
Not conducted	114
Not possible to conduct	16
Total number of non-participants	**579**
Total responses analysed	449

The responses given were coded to provide a set of reasons describing why potential participants were not interested in joining the project. This data shows that the main reason for not joining was a lack of interest in the research project. This was the given by 274 people (61%) (Table 5).

Table 5: Non-participation reasons

Main reason for non-participation	
Research project	274
Not eligible	59
Smart meter technology	46
Bills	26
Personal circumstances	19
Generational factors	9
Intermediaries	4
Self-perception	4
Culture	3
Gender	3
Timing of engagement	1
No reason	1
Total	449

The next main reason for non-participation was because the potential participant was found to be ineligible (59 cases (13%)). Of these, 15 reported that they already had a smart meter (this may relate to a misunderstanding about what a smart meter is), 14 were moving house, 14 were changing supplier and in 10 cases the British Gas account holder had moved out. 46 people refused due to the smart meter and out of 26 who identified bills as the main reason for non-participation 24 felt that bills were already low enough, making the project redundant.

To understand the reasons for non-participation further, the responses were coded with sub-reasons. For example there were a number of different reasons for not wanting to be part of the research project. 90 people felt being involved in the project would to be 'too much hassle'. 79 people were 'sceptical of change' and concerned that the project would introduce a set of new technologies and processes into their home that might affect their routines. A further 59 felt they were too busy.

Figure 26 shows the reasons connected to smart meters. 28 people had 'no interest in having a smart meter, nine had surveillance concerns; seven had concerns about technology they didn't know; while two preferred to wait for the national roll out.

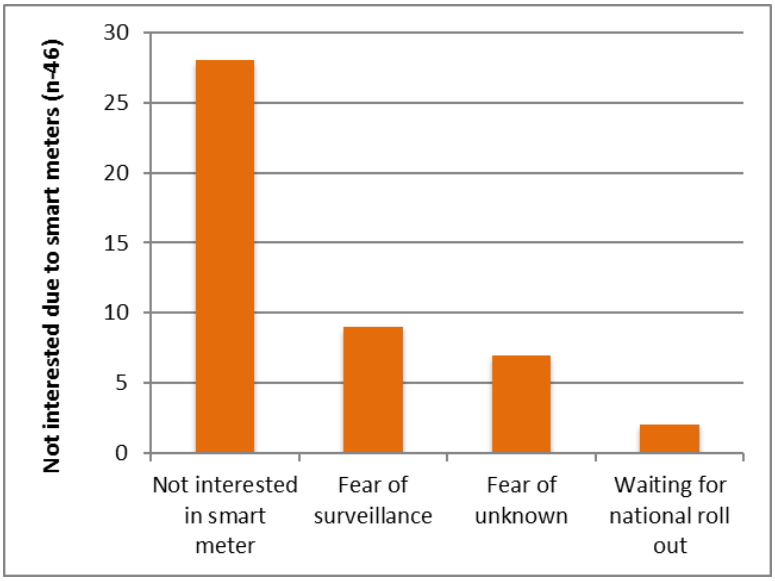


Figure 26: Sub-reason for non-participation due to smart meters

8.3.10 Reasons for taking part - and not taking part – conclusions

In order to engage people successfully, it is important to understand what messages resonate with them, what motivates them. The research conducted with participants has found that the top reasons for signing up were:

- the opportunity to save money;
- better visibility of energy bills;
- the offer of free devices;
- easier top-up for prepayment customers; and
- the opportunity to take part in an interesting project.

The research found that the top reasons for not taking part were:

- the participants were simply not interested in the project; they felt it would be too much hassle or that they were too busy;
- the customer had just, or was about to, become ineligible e.g. changing supplier or moving home; or
- the customer was sceptical of, or not interested in, potential benefits of smart meter.

8.4 Trial 2 recruitment and installation evaluation

8.4.1 Recruitment overview

As shown in Figure 27, a high proportion (86%) of participants who were active in the project at the start of trial 2 recruitment signed up to trial 2. Sign-up rates for the two tariffs were similar (Figure 28 and Figure 29). The recruitment approach built on learnings from the trial 1 recruitment process in terms of the best time of day to all (after 10am and avoiding the afternoon school run).

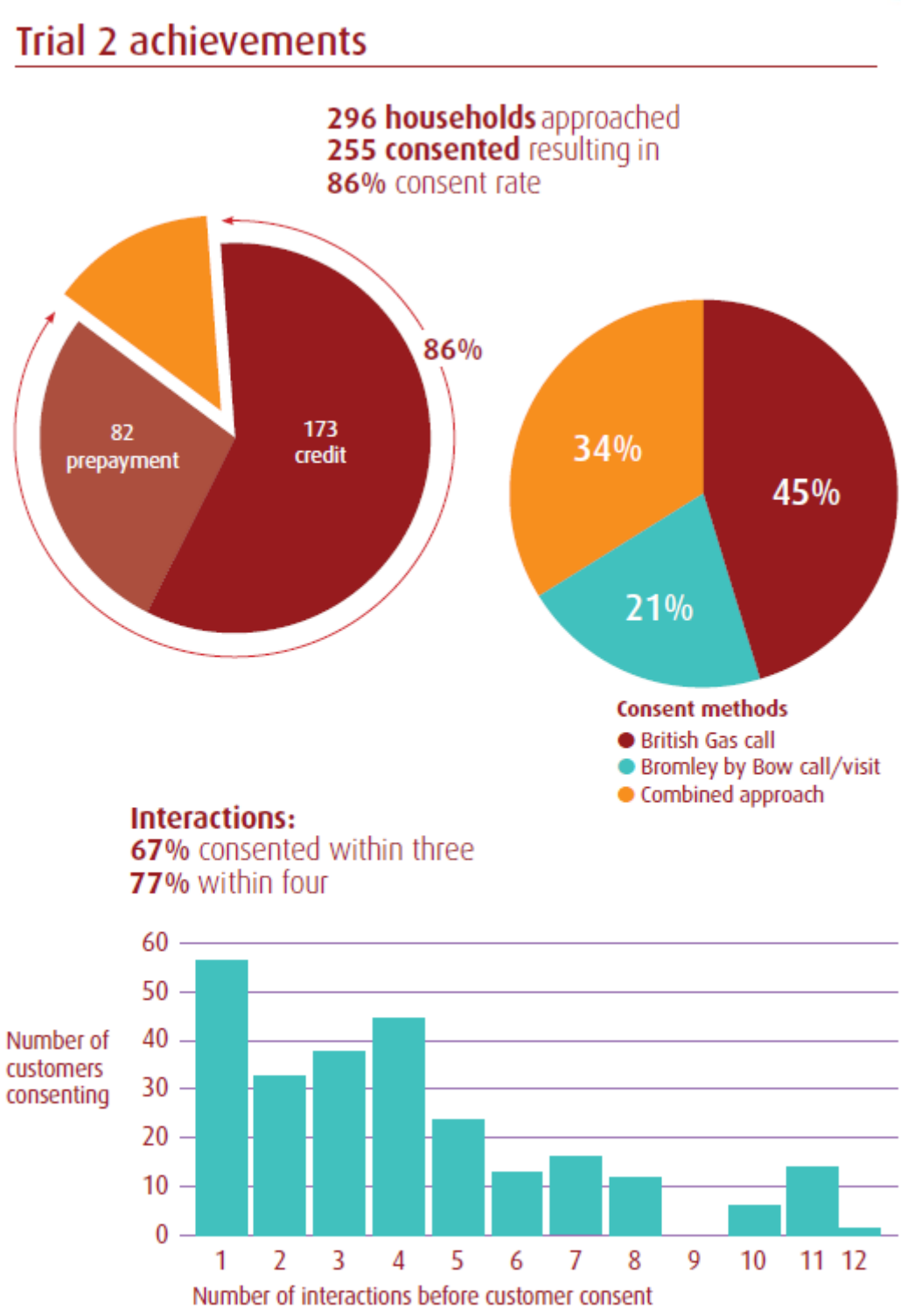


Figure 27: Trial 2 consents

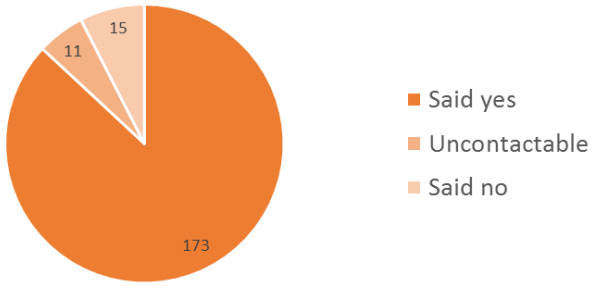


Figure 28: HEFT sign-up (credit customers)

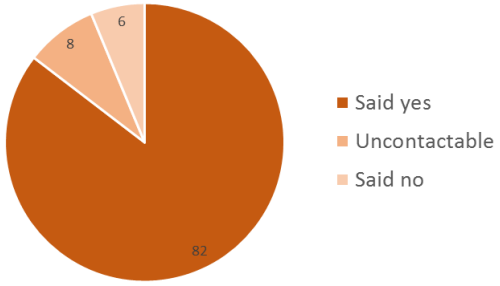


Figure 29: Bonus Time sign-up (prepay customers)

Furthermore, because of the CFO's excellent knowledge of the project's participants, the recruitment approach could be tailored to the participant (for example phoning or door knocking at times of day the participant was most likely to be in). Both factors contributed to the high sign-up rate for trial 2.

8.4.2 Trial 2 recruitment outcomes

Figure 30 and Figure 31 show the point of sign-up by prepayment and credit customers. As explained in section 6.3.2 above, the sign-up process was different for the two groups:

- credit customers had to provide verbal consent to British Gas.
- prepayment customers could provide verbal consent to Bromley by Bow Centre and did not have to speak to British Gas.

Figure 30 shows that the majority of participants signing up to receive Bonus Time notifications did so after speaking to the customer field officers. 10 signed up before British Gas tried to call them (this was done as participants were having their devices delivered). 27 signed up through the initial British Gas phone call (either on the first, second or third attempt) and 43 signed up after speaking to the customer field officers, after British Gas had been able to reach them. Most of these signed up during the first or second phone call by the field officers, but some signed up at door knocking visits (first or second attempt). However, although the Bonus Time sign-ups were simpler than HEFT (as they did not require the participants to speak to British Gas), they still proved to be resource intensive. As shown in Figure 30, consent was secured from five participants after eight contact attempts; three call attempts from British Gas, three call attempts from the CFO team and a further two door knocks. A further seven participants required seven contact attempts.

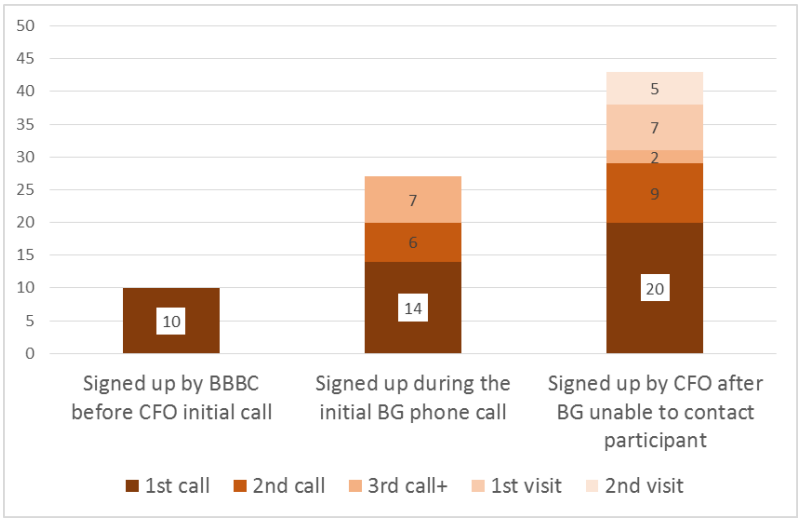


Figure 30: Bonus Time point of signup (prepay customers)

Figure 31 shows that, in contrast, the majority of participants switching to HEFT did so through the initial phone call from British Gas – 89, of whom 32 signed up at the first phone call. A further 84 signed up after interaction from the customer field officers as well as British Gas. 20 of these went through two rounds of interaction; they asked for a British Gas call-back after speaking to the field officers, but then British Gas could not get hold of them so the field officers tried again to contact them, and this time they were successful in arranging a British Gas call-back. Four of these 20 went through several loops of contact between the CFOs and British Gas making it very resource intensive to secure their participation (up to eleven contact attempts in total).

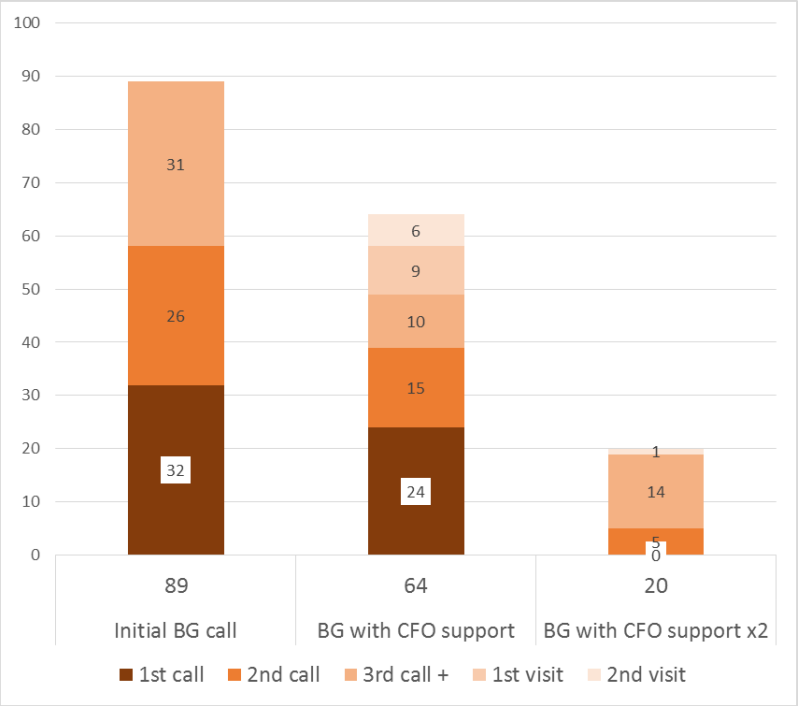


Figure 31 HEFT point of sign-up (credit customers)

The team found that participants were more likely to take a call from the CFO team (whose calls would appear in participant's phones as a mobile number, whereas British Gas calls appeared as a more impersonal 0800 number). However, to switch to HEFT, these participants had to accept a British Gas call. As explained above, for some participants, it took many attempts to secure this.

The figures show that a higher proportion of HEFT participants gave consent to British Gas than Bonus Time participants; more of the latter required some support from the CFO team before consenting to take part. Just over half of HEFT participants had signed up within three contact attempts whilst just over a third of Bonus Time participants signed up within three contact attempts[18]. However, for a handful of HEFT participants, the recruitment process was very resource intensive – more so than for any of the Bonus Time participants – due to the requirement to give consent to British Gas. (This difference in sign-up process for the two offers makes it difficult to directly compare the two.)

8.4.3 Recruitment materials and communication

8.4.3.1 Warm up letter and newsletter

The majority of participants reacted positively to these.

- 14 out of the 25 said it was the reason they signed up or contributed to their decision to take part
- 17 of the 25 said the communications were clear and easy to understand

"Easy to understand because it had pictures as well" (newsletter)

"Newsletter was good in the sense you could see what was going on in a nutshell."

However, one felt there was too much information but that the panel meetings helped them to understand it; another also referred to the face to face meetings being helpful.

"Reading it and how it was laid out. I'm not very literate. It was good, but the meetings helped too."

"When I went to the meeting it was explained and this confirmed what was explained (in the letter)."

[18] Not including the ten who signed up before British Gas tried to make contact (this option was only offered to some participants, based on those receiving delivery of devices from the customer field officers.)

8.4.3.2 Welcome document

Upon signing up to trial 2, participants were sent a Welcome Document with a £10 voucher. This document explained the DSR trial and the next steps in the project. All but three of the participants interviewed or attending the panel recalled receiving this, though three of these couldn't remember what information it included. Those who could recall it were positive about it.

> *"It was easy to read, useful, it told me the information I needed."*

> *"Very useful. Especially saying what happens next. I thought they explained it well, you see everything, what is happening. It was well explained."*

Three panel members said they did not receive a voucher with this document. It is believed that the voucher may have been discarded with the envelope as it was not clipped on. Replacement vouchers were provided to these three participants.

None of the panel members said the voucher was a major incentive for saying yes.

8.4.3.3 Shifting advice

Just before the start of trial 2, participants received a document with advice about how they could shift their electricity use to make the most of the trial. Different versions were produced for HEFT participants and Bonus Time participants.

HEFT: All but one interviewee recalled receiving the leaflet and all those reported implementing something. Panel members found it clear, relevant and interesting. One, who was concerned about how she would make changes, found the document reassuring.

> *"I laughed at first because I'm one of these people that if I've got washing that needs doing I just do it. I don't keep anything till the weekend. But now I keep it to the weekend."*

One said it demonstrated to them what they could save whilst another commented that he is rarely home at the weekend. Two commented on how their children/families have become involved in taking part:

> *"I can't explain to you the difference it has made. That's when we do our catch-up time, washing, ironing, hoovering. We've made it our day where we can all chip in within the time and do the house chores."*

> *"My kids have learned it too. They are better than my husband."*

Bonus Time: the interviewees in this group were generally positive about the communication they had received, though two of the nine could not recalling receiving the shifting advice and there was more uncertainty about whether they would be able to make changes.

- Of the seven who received it, some demonstrated that they have understood it and are making changes.

> *"My 12 year old asks if it Bonus Time; she switched off the light, switched off the TV and reads a book. The whole family have participated."*

- Others referred to general energy saving behaviour rather than to shifting use at all.

> *"I really haven't had time to do anything, but I use the kettle and bulbs and extension lead."*

- Another mentioned they were struggling to change when they used energy.

In contrast, panel members had a clear understanding and found the shifting leaflet the most interesting/helpful. Two reported having put the advice onto their fridge so they can easily refer to it and two have shared the information with their family.

Partners felt that in general the communication materials had been well received, particularly the shifting advice.

8.4.4 Reasons for saying yes to trial 2

Participants were asked specifically whether they found the trial 2 offer an attractive proposition.

8.4.4.1 Credit participants

All sixteen credit participants reported that they found the HomeEnergy FreeTime tariff an attractive offer.

> *"Extremely [attractive]. Only started recently. I can work out a day when I know I could use the amount of electric without being charged."*

> *"Yes, very attractive; why wouldn't it be? For people who are at home the majority of the time it's very attractive; I don't spend much time at home over the weekend but it's still attractive"*

One participant was slightly sceptical, thinking that energy supplier must be spreading the cost of the free electricity over other times.

> *"I think it's a good idea. I chose the Sunday, but do they just spread the cost over the week?[19]"*

One pointed out that the fact that it was at a weekend was good, as that was when their children were at home, so presumably more electricity was being used.

Another was very positive about it, but found the timing frustrating as he is usually out in the morning:

> *"Yes it was, I had never seen it before, no other company does it so I thought yeah; I wish the timing was different though, it's only in the morning, it would be better in the evening[20]."*

Panel members said they were motivated to yes by the prospect of saving money – but also by the prospect of doing something novel and taking on the challenge.

"It should be useful for everyone – even doing just one load of laundry, or using an electric heater".

> *"The pennies could add up."*

8.4.4.2 Prepayment participants

When interviewees were asked about whether they found the Bonus Time offer attractive, seven out of the nine said they did, but two said they did not really understand it. One was planning to go to the next participant panel to learn more about this.

Panel members said they were attracted by the prospect of saving money and electricity, but again by the potential to take part in something novel. This group did not expect to earn much from the trial. Nonetheless the offer was attractive due to its novelty.

> *"Give it a go, I've got the kit, it's sending data, there's no extra time or responsibility, just to turn off the switch which I do anyway."*

[19] The cost is not spread over the week, it is charged at the standard rate which nearly all customers were already on.

[20] HEFT is in fact from 9am to 5pm.

There were additional constructive comments from interviewees about Bonus Time that helped to inform and improve the Critical Peak Rebate (CPR) research design[21].

8.4.4.3 Communication from project team

The majority of interviewees recalled speaking to a customer field officer as part of the trial 2 recruitment process. All comments were positive (apart from one comment referring back to the original project recruitment process) and there was lots of good feedback about the field officers. There were references to the field officers being informative, taking time to explain the scheme and answer questions.

Many interviewees, who were known to have spoken to British Gas, couldn't recollect getting an initial call from British Gas. Where they could, their comments were positive; participants referred to the contact being straightforward and to the fact that they trust British Gas.

> *"We knew it was still with BG so you can't go wrong."*

Bonus Time panel members were happy with the text message format for the notifications of the Bonus Time periods, and with the timing of these notifications.

HEFT panel members all found British Gas helpful in explaining trial 2, though two were left with wrong/confused expectations regarding what was required from them in order to take part (e.g. believing that written consent was required when it wasn't.)

8.4.5 Reasons for saying no to trial 2

Some customers specifically said that they did not want to take part in trial 2:

- 15 credit participants said they did not want to switch to the HEFT tariff of whom:
  - Seven gave no specific reason;
  - Five said their bills are generally low or they don't use much electricity;
  - One said they believed the trial to be a trick;
  - One said they would come into the Bromley by Bow Centre to talk through it with the field officer team (but didn't in fact do this);
  - One was moving home soon (and would thus be ineligible to take part in **energy**wise)

- Six prepayment participants said they did not want to receive Bonus Time notifications, of whom:
  - Three said they didn't have time to take part;
  - Two gave no specific reason; and
  - One said they would come into the Bromley by Bow Centre to talk through it with the field officer team (but didn't in fact do this).

[21] This will be included in the SDRC 9.5 report as part of the discussion of the response and feedback to the CPR trial as this is still in progress.

8.4.6 Recruitment processes

It was not possible to have a real time sharing of data between the CFO team and British Gas which meant that partners did not always have the latest information for any one participant. Building on lessons from trial 1, a daily call was introduced for the duration of the trial 2 recruitment period between the two teams to ensure that everyone was as up to date as possible in terms of the status of individual participants. This helped to ensure that the process was as seamless as possible from the participant's perspective.

Given the relatively complicated nature of the trial 2 recruitment and installation process, which required different materials to be sent at different times to different customers (depending on their meter type and group), the customer field officer team found it useful having a schedule, comprising a spreadsheet prepared by CAG Consultants, which clearly showed what should be sent out, when and to whom.

Partners agreed that the call scripts for recruitment were longer than ideal, and the section on savings and calculations which were part of the Bonus Time script generated some confusion. In some cases, participants required several call backs after the script was read to a non-decision maker initially. However, the call back schedule that was implemented and coordinated between British Gas and the customer field officers was effective.

British Gas reported that participants were more likely to answer a phone call from the field officers (where a local or mobile number would appear on the recipient's phone) rather than British Gas (which would appear as an 0800 number).

8.4.7 Overall feedback from participants

There were lots of very positive general comments from the interviews relating to trial 2 recruitment – for example:

> *"**energy**wise has really come at the right time; it's a helping hand, it's like a bonus things; we're really pleased about it, it's really helpful."*
>
> *"I just think you have a lovely team that work well together. If I have any questions they are always well explained and you have a majority of mixed ethnic (sic) on your team which is good."*
>
> *"The project is absolutely great; the people are very good, there's nothing I'd want to change. Everything is explained property. The best thing about it is the panel; I really like going to that."*

8.4.8 Trial 2 recruitment – conclusions

Key achievements

- A high proportion of participants – 86% – signed up to take part in trial 2 (with similar levels for the two different offers), showing that the two propositions were well received.
- The recruitment approach built on learnings from the trial 1 recruitment process for example in terms of coordination of activities (with a daily call between key partners) and in terms of the best time of day to call (after 10am and avoiding the afternoon school run). This resulted in a smoother recruitment process. (It should be noted that participants were already engaged in the project, unlike trial 1 recruitment.)
- Furthermore, because of the CFO's excellent knowledge of the project's participants, the recruitment approach could be tailored to the participant (for example phoning or door knocking at times of day the participant was most likely to be in).
- Participants were very positive about the materials finding them to be accessible and fit for purpose.
- In particular, the shifting advice was well received with feedback that this is useful in helping participants to respond to the ToU tariffs.

Learnings

- Most participants interviewed understood the offer and were positive about it.
- Communicating critical peak rebates to customers can be challenging particularly in the case of vulnerable participants and/or those with limited English. Some participants really benefit from face to face communication. A substantial amount of resource was put into communicating Bonus Time involving both CFO and British Gas' staff with appropriate foreign language skills. A video explaining the process would be beneficial.
- Call scripts should be kept as short as possible.
- Customers are more likely to respond to a mobile number that appears on their screen than to an 0800 number.
- Originally, with British Gas leading the recruitment, the estimated level of resources required for recruitment was based on their business as usual experience. However, after the first few days of recruitment it was observed that the project required longer to both get hold of participants and get consent over the phone. This was then successfully addressed through British Gas increasing the resources allocated to outbound calls and by the CFO team stepping in to support British Gas in the recruitment process.
- Interactions with customers should be minimised by reducing or eliminating the need for them to speak to more than one person as part of the signup process. Because credit customers had to provide consent to British Gas (as they required a tariff change), but were in some cases more likely to accept a call from the CFO team (see point above), many interactions were required for a handful participants before consent was granted and an installation appointment booked.
- Due to operational limitations it was not possible to have a real time sharing of data between the CFO team and British Gas which meant that partners did not always have the latest information for any one participant. Instituting daily calls between the two teams helped to ensure that everyone was as up to date as possible in terms of the status of individual participants.

8.4.9 Installations

In total, 98% of participants who consented to trial 2 received their smart meter installations (249/255). Of the control group participants who had their installations after they had consented to the trial 2, 95% of customer received their installation upon the first attempt. The average time from installation to signup (11 days) was greatly improved when compared to trial 1 (36 days).

13 control group customers interviewed and 3 attended panel. One had not received their smart meter. The majority felt it had gone well.

> *"They were great, they just got on with it."*

Five reported issues; three of these were relatively minor and quickly resolved (e.g. a short delay in receiving the smart energy display). Of the others:

- one felt the engineer was rushing and reported that the meter was installed in an inconvenient location. (It is unclear whether this participant was referring to the smart meter, which would have been installed where the previous meter was, or the smart energy display, which can be moved around.)
- another said the engineer arrived late after she had gone to work and explained it to her daughter. She initially had problems installing it, but called British Gas for an explanation.

Partners noted the impressive 98% installation completion rate on trial 2, and the fact that the average time between a participant consenting to trial 2 and receiving their installation was 11.5 days – considerably shorter than the average 36 days for trial 1. This was down to a combination of increased customer engagement (participants have now been part of the **energy**wise project for well over a year) and additional resources provided by British Gas to ensure plenty of Saturday installation appointments could be offered. In addition, the customer journey was streamlined compared to early stages of trial 1; appointments could be booked directly by the CFO team.

Building on the learning from trial 1 installations, British Gas liaised with the social housing providers to ensure meter access pre installation where necessary and this helped to streamline the process.

One customer was fitted with solar panels in-between trial 1 and trial 2 meaning a non-smart meter exchange was required.

8.4.10 Trial 2 installations – conclusions

Key achievements

- 98% of installations requested for trial 2 were completed; 95 credit and 27 prepayment smart meters.
- As per trial 1, participants were generally very happy with the installation process.
- Installs were completed on average within 11.5 days of consenting – considerable quicker than in trial 1. This was due to a combination of:
  - increased engagement by participants at this stage in the project;
  - British Gas offering a high number of weekend appointments;
  - more effective liaison with the social housing provider caretakers to facilitate access to meters where necessary;
  - a streamlined customer journey with customers able to book their British Gas installation appointment with the CFO team.
- 835 energy efficiency devices were gifted to participants.

Learnings

Where installations need to be completed within a short timeframe, this can be facilitated by ensuring that plenty of weekend appointments are available (though this is resource intensive as it required British Gas to offer overtime to their Smart Energy Engineers).

Streamlining the customer journey should increase installation success rates. For example, enabling the CFO team to directly book in appointments (by ensuring they are provided with potential appointment slots) means less hassle for customers who should then be more likely to make and keep an install appointment.

Where smart meters are being installed in social housing, the installation process can be facilitated by:

- the energy suppliers requesting a list of addresses from the housing provider for which a staff member (e.g. caretaker) will need to enable access;
- the energy supplier then contacting the caretaker in advance to request they are present to enable this access at the appointed time.

8.5 Working with a trusted intermediary

The approach of working with a trusted intermediary has proven to be very successful in recruiting and engaging this target audience. Some examples of the beneficial approach a trusted intermediary can offer:

- Bengali speaking field officers were able to tackle language barriers throughout the recruitment phase:
  - Majority of the participants spoke Bengali in Sylheti dialect
  - Ease of communication led to high rate of signups in both trials
  - Initially during the installation phase a lot of the PassivSystems engineers were refused access. On some occasions, when Bengali speaking CFOs accompanied these engineers, they were given access.
  - As a learning, the majority of recruiters from other recruiting organisations were then teamed up with a Bengali speaking CFO to increase the success rate.
- The field officers are aware of locally relevant culture and customs; for example:
  - elderly participants within the Bengali community were addressed as either elder brother/sister or uncle/aunty. This approach helped build a stronger/faster personal connection.
  - during recruitment, interactions at certain times on Fridays was avoided due to prayers

- installation and recruitment were scheduled around the holy festival of Ramadan: as many customers were hungry and tired in the mornings, FOs knew to avoid contacting them at this time
- no recruitment or installations were booked on the holy festival of Eid as many participants use this day to visit family and friends

- Open door
  - Bromley by Bow Centre is well known for its work with the community and its open-door policy – accessible to all
  - participants find it comfortable and easy to visit or telephone for immediate assistance
  - **energy**wise participants have a dedicated line at Bromley by Bow Centre for immediate support
  - during trial 2 some customers received calls from British Gas, but preferred to come into the centre to first talk with to the field officers
- End of project
  - once **energy**wise ends, customers will be disengaged from the project
  - Bromley by Bow Centre is ideally-placed to continue helping these people where necessary with, for example, support on budgeting, energy efficiency and accessing other support services.

8.6 Efficacy of ongoing engagement activities

A formal evaluation of the project's ongoing engagement activities will be carried out at the end of the project. However, feedback is continually captured through participant panels. Moreover, the very low dropout rate between the installation phases suggest that the ongoing engagement is successful in achieving one of its key goals; maintaining participation in the project. By monitoring the reasons for attrition it was observed that between May 2016 and May 2017, the only people leaving the trial were those who had to be disengaged because they either moved house or changed supplier. Feedback from participants at the panel meetings is generally very positive in terms of comments on the newsletter and on the CFO team.

8.7 Evaluation of recruitment and engagement costs

Table 6 presents an overview of the costs involved in delivering the recruitment and engagement elements of a project like **energy**wise. Costs are broken down into one off costs (such as training up a CFO team), regular costs (such as the cost per CFO team member) and per participant costs (such as the cost of providing thank you vouchers). The section below the table provides explanatory notes for the different sections of the table.

Table 6: Recruitment and engagement costs

Item		One off or monthly	One off cost £	Regular cost £	Per participant cost £
Field officer team	Training	One off	5-10,000		
	Disclosure checks	One off	60/check		
	Office equipment	One off	1000		
	Manager - 0.5FTE	Monthly		Around 2200/month (inc overheads ex VAT)	
	CFO - full time	Monthly		2300/month	
	CFO assistant - full time	Monthly		Around 1900/month	
	Host organisation management	Monthly		Around 1000-1500/month	
Additional recruitment resource		One off	45-100,000		
Office running costs	Freephone line	One off, set up cost and regular		50/month	
	Mobiles			30/field officer	
	Stationery and ink			150/month	
Materials	Design of leaflets, packs	One off	5-10,000		
	Printing	One off			20/participant
	Postage	Ongoing			10/participant /annum
Travel expenses	Travel within the borough for door knocking and delivery of devices	Monthly		100/CFO	
Participant panels or focus groups	Venue	Quarterly		200/panel	
	Refreshments			80/panel	
	Incentives	Quarterly		240/panel	
Vouchers for participants		One off			50/participant
Approximate totals	**One-off costs**	£56,000 - £121,000 (office set up, design, recruitment resource)			
	Monthly costs	£11,000/month recruitment phase (4 FTE staff)			
		£7,500 engagement phase (2.7 FTE staff)			
	Plus	£4,000/year for 8 panel meetings			
	Plus	£100/participant in vouchers and postage			

Notes:

Training: Depends what's needed for the project; on **energy**wise this has included training on energy advice (from NEA), social research (from NATCen), on smart meter technologies (from British Gas), recruitment role-play (CAG Consultants), facilitating participant panels (from CAG Consultants), identifying vulnerability (from NEA) and safety whilst out in the field (from the Suzy Lamplugh Trust). Important to allow sufficient to train up all those involved in recruitment and also to provide refresher training or training for any new team members, as required.

Office equipment: Includes things like installing a phone line, purchasing a printer – will depend what is available at the host organisation

Salaries: Will vary with location and experience. Allow for salary increases over course of project and potentially end of project bonus

Number of CFOs: Will depend on size and nature of project; **energy**wise started with a team of four and then reduced to a core team of 2.5 FTE. The assistant will primarily remain the office managing the team and won't go out into the field. There will be extra monthly management resourcing costs from the host organisation involving liaison with CFO Manager plus internal administration. On **energy**wise, this was set up to be between £1000-1500, however it will depend on the agreements with the host organisation.

Additional recruitment resource: On **energy**wise, a pair of CFOs could complete 12 door knocks per day on average and nine door knocks were required to achieve one sign up. (This number would be higher for an area based scheme with properties on the same street; **energy**wise participants are spread out across the borough.) 439 were signed up through door knocking through 3,869 door knocks. This required 322 days of door knocking, or 644 person days based on teams of two. The original team could provide 200 of these days (based on two CFOs full time door knocking), leaving 444 days to be bought in. This could either be through additional staff employed at the centre (it was originally planned to bring in three additional CFOs for five months, at a cost of around £30k, which would have provided 300 days of resource; in fact, 4.5 would have been needed to complete the necessary door knocks, at a cost of around £45k) or through bringing in specialist recruiters (the latter cost around £220 a day, costing a total of around £100k. This is a more expensive, but a more flexible, option.)

Mobile phones: It is important to resource a field officer team with their own phones; both an office based landline number and mobiles so they are contactable out in the field.

Materials: Costs will vary enormously depending on what needs to be produced – this is designed just to give an indication. It's important to allow sufficient budget to design highly visual materials that are appropriate to the target audience. Most materials will be one-off designs, but some will need to be regularly updated; it's useful to get designed documents in a template format that can be used by staff members to keep costs down.

Postage: This figure assumes that six items posted to each participant per annum

Panels: The venue provided for free by the **energy**wise recruitment partner, but for most projects this would need to be budgeted for. Facilitation of the panels is now carried out by the CFO Manager, following appropriate training, but was initially done by one of the project partners (incurring additional cost); it is important to ensure a suitably trained and experienced person is running the panels. Refreshments are important to help attract people to a panel. Allow around £10 per head. On **energy**wise, participants were given £30 in vouchers as a thank you for their time. Panels should typically have around eight participants on average.

Vouchers: Depends on nature of project. On **energy**wise, all participants will receive around £50 in vouchers, plus more if they attend panels or take part in interviews.

Total cost: As shown in the table above, total costs to run, for example, a five month recruitment campaign (similar in scale to the **energy**wise project) followed by a one year trial or project are roughly:

- £111,000 - £176,000 for the set up costs and five month recruitment. (The lower figure is based on recruiting staff and the upper cost on bringing in specialist recruiters.)
- £90,000 for a one year trial (based on a team of two full time CFOs and 0.7 full time equivalent CFO Manager and including 8 participant panels).
- Plus £100 per participant to cover materials, postage and vouchers.

8.8 Efficacy of engagement strategies to support the fuel poor on energy saving and DSR activities

Do you have any comments on the Customer Field Officers?

The project is absolutely great; the people are very good and there's nothing I'd want to change.

"[The **energy**wise officers] are absolutely great, they are very polite; they listen to what I say, I am really happy with them.

The **energy**wise communication strategy was focused on recruiting and engaging participants in a research trial and providing the best support possible within the constraints of the research design. (The research nature of the project limited the extent to which support could be provided to participants to ensure they were able to access the full benefits of smart meters and DSR, as this may have impacted on the research findings). As such, some of the approaches may have limited replicability.

However, some of the learnings will have relevance to those developing strategies to support the fuel poor on energy saving and DSR activities. These include:

- providing a tailored approach appropriate to the target audience. For example, in the case of **energy**wise, offering face to face engagement and support from a team of customer field officers who understand the local community and have appropriate language skills;
- engaging with the community to understand the needs of the target population, who they trust, the messages that resonates with them, and the approach that will be most effective;
- creating a partnership of organisations with the required expertise; a good partnership is absolutely key to a successful outcome;
- as part of this, working in partnership with highly respected local community organisations;
- working with a trusted energy supplier;
- providing a Freephone landline. On **energy**wise, participants have been provided with a Freephone and a local landline number that they can call. About half the phone calls received by the field officer team come through on the Freephone number.
- keeping communication materials simple and highly visual. This is particularly important for audiences that may not have English as a first language; and
- a streamlined customer journey with customers able to book their installation appointment with the CFO team.

What do you think about the communication you receive from energywise**?**

I think the newsletter is a better format than previously.

The newsletter was concise and included info a link to Youtube so it was useful.

9 Participant attrition

9.1 Numbers of participants leaving the project

538 people signed up to the **energy**wise project and 276 participants remain active as of 10 August 2017. 258 participants had left the research project by 12 June 2017, when the analysis was conducted by University College London. The majority (46%) of these left in the early stages, most after receiving the trial terms and conditions. No one chose to leave the project between May 2016 and May 2017; however a few participants continue to be disengaged as they become ineligible due to changes in their circumstances such as switching away from British Gas, or moving house. In addition, a few control group participants were disengaged at the start of the DSR trial as they did not accept, or did not respond to attempts to contact them about, a smart meter installation. Figure 32 shows participant attrition by project stage, and demonstrates the shift over time from more participants opting to withdraw to more participants being disengaged. This data covers both trials and includes the 13 control group participants who were disengaged in June 2017 'after receiving the trial Terms and Conditions' because no smart meter installation was possible.

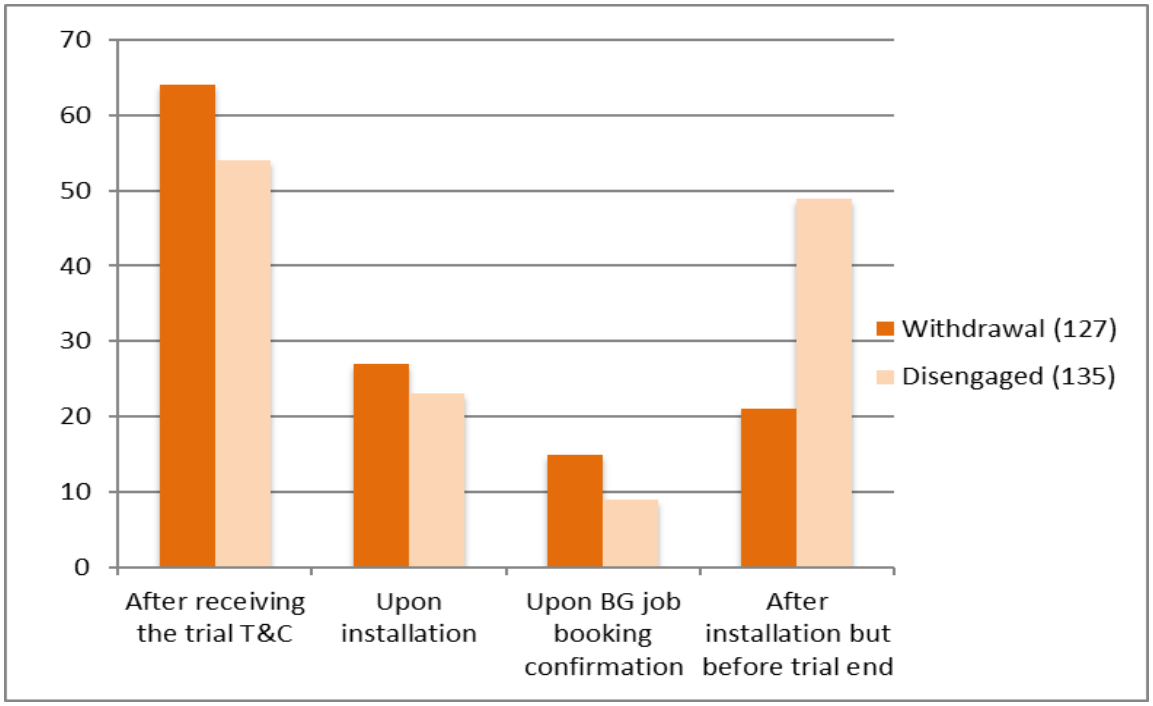


Figure 32: Attrition by project stage

Of the 258 participants who have left the project

- 127 asked to withdraw from the trial;
- 135 were disengaged by the project team; and
- four participants asked to withdraw and also had technical reasons to be disengaged (therefore making the total number of reasons analysed 262, as these four had two drop-out reasons associated and where double counted).

9.2 Project disengagement

135 participants have been disengaged from the project. Figure 33 shows the main reasons why these participants were disengaged. Ineligibility was the primary reason (e.g. participant changed supplier or moved home after signing up), followed by technical difficulties with the installation of the requisite project equipment.

The project has captured more details on why participants have had to be disengaged. Within the broad category of eligibility 38 participants have changed suppliers, 18 participants have moved house and five participants have changed their meter type.

Out of the 25 disengaged due to a technical reason, 16 participants have had to be disengaged due to technical issues specifically with meter installation. This includes meters being impaired, inaccessible or placed in spaces which prevented a smart meter from being installed.

41 (30%) participants were disengaged due to access difficulties. This includes 24 participants who were inaccessible to book either an initial installation, or to rebook a second installation, 12 participants who refused access to engineers to carry out the installation process and five participants whose bespoke time constraints for installations could not be accommodated by the project team (for example a participant who was away from the UK for five months).

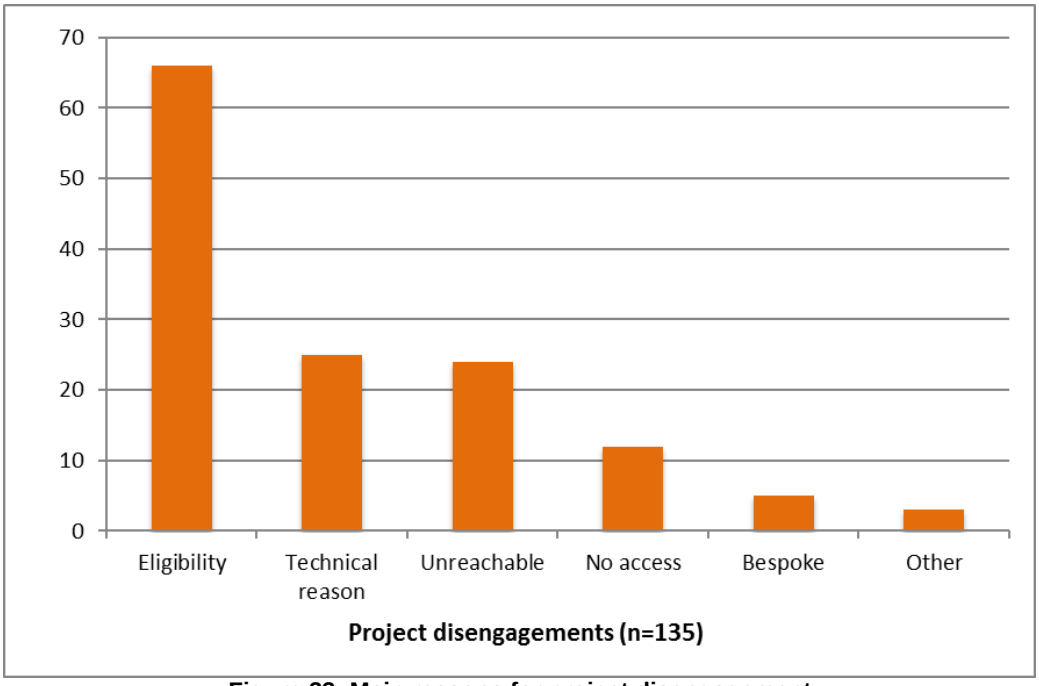


Figure 33: Main reasons for project disengagement

9.3 Participant withdrawal

127 customers chose to withdraw from the project. The main reasons are captured in Figure 34. Concerns about the equipment were the main cause (35 participants), followed by issues raised through the research messaging (34 participants). Installation, personal circumstances and household dynamics all contributed to further withdrawals (44 in total).

The main reasons for withdrawal have been divided into sub-reasons for more detailed analysis.

Figure 35 shows the range of equipment-related issues that caused 35 participants to withdraw from the project. 17 people withdrew because they did not want a smart meter. Participants also withdrew due to concerns about the other equipment installed by PassivSystems. Eight left because of a general dislike of equipment and others left due to the communications hub installed to transmit data and the temperature sensors. Their reasons covered both aesthetics and safety.

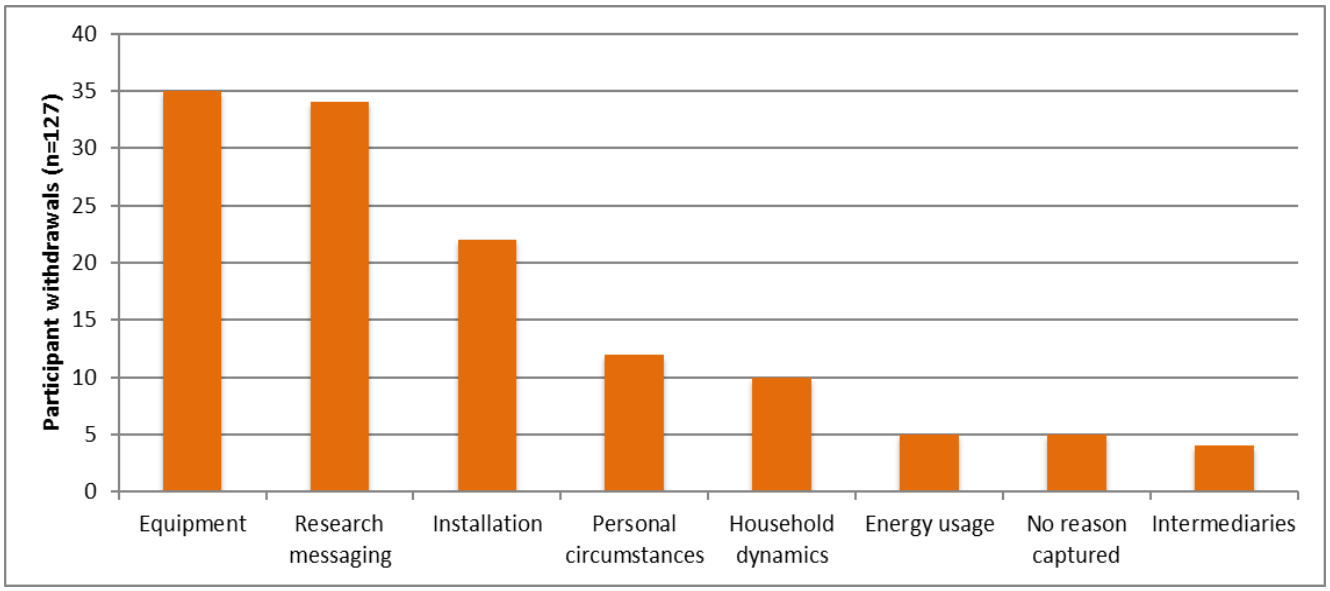


Figure 34: Main reasons for participant withdrawal

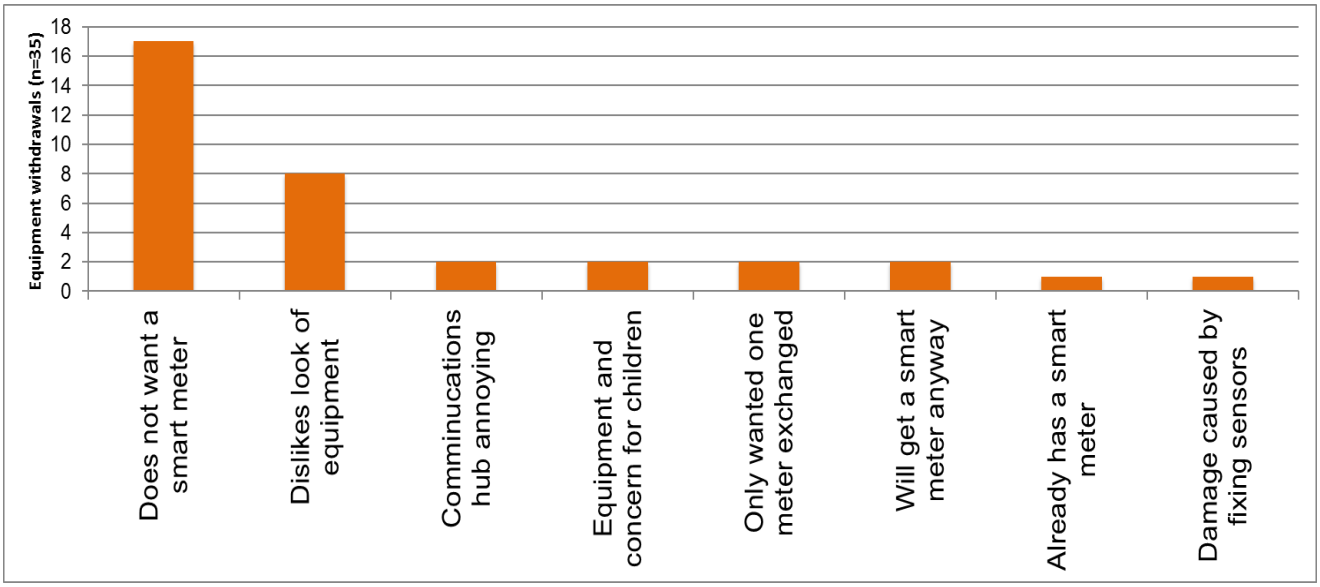


Figure 35: Sub-reasons for withdrawing due to equipment

Figure 36 shows the range of 'research messaging' issues that drove participants to withdraw. Research messaging here means description of the research project and whether this description was accurate and compelling enough to secure ongoing participation. 12 people 'had a rethink about the project' and on further reflection decided they did not want to participate in the trial. Nine people found the project 'too much hassle' and could not be convinced to continue. Interestingly only three people withdrew from the trial explicitly because they were unhappy about being in the control group and not receiving their energy efficiency devices at the installation phase of trial 1. From conversations with the customer field officers this was understood to be a source of frustration for quite a few control group members, but these frustrations have not turned into active withdrawals. Alternatively a non-specific reason, such as 'rethought the project' may have been used by participants to cover for a number of concerns or frustrations.

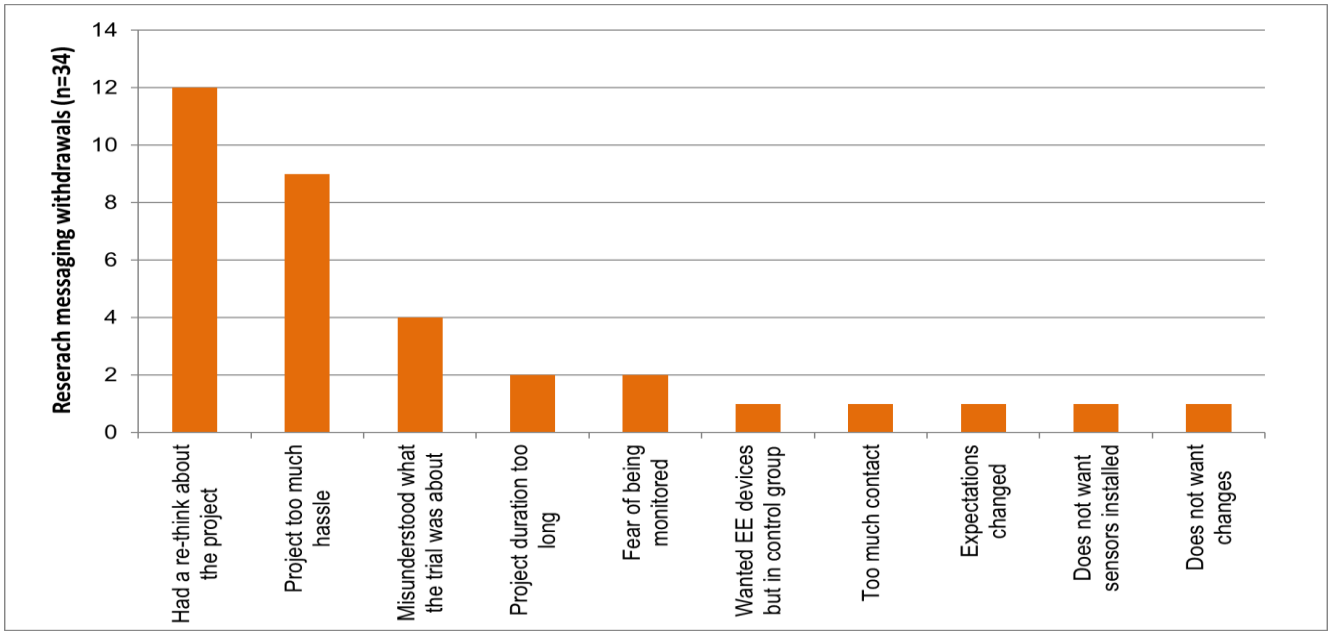


Figure 36: Sub-reasons for withdrawing due to research messaging

Analysis of the sub-reasons shows two main drivers for customer withdrawal (Figure 37); the general hassle of the installation process (19 cases) and customers not wanting a smart meter (17 cases). A third significant factor was that customers changed their minds about the project after signing up (12 cases).

As well as these single sub-reasons the pattern of customer withdrawal shows two broad issues to consider. The first issue relates to the project technologies; their look, installation and whether or not they will be a benefit or a harm to the occupants in the home. This accounted for 62 withdrawals, or 49% of the total. However only 21 were explicit in rejecting a smart meter. The second issue is the commitment to participate in a research project. The analysis shows that an initial decision to join was revoked following, for example; a change in personal circumstances, discussion with family and non-family members, or reconsidering the project benefits and viability of participating for the household. This accounted for 60 customer withdrawals or 47% of the total.

Project partners felt that the top three actions to reduce numbers of households dropping out would be:

- Clearer messaging of what is involved in the project, possibly including a video, with quality assurance of the door knocking phase to ensure accurate messaging to participants.
- Avoid temperature loggers, unless they form part of the project scope, as they can present technical issues requiring multiple visits, and which are also more intrusive as they require an installer entering a customer's bedroom (not just the hallway/kitchen, which is all that's required for the smart meter install).
- Streamline the process to reduce the number of interactions with customers.

Figure 37: Participant drop-outs

9.4 Strategies to minimise attrition, dissatisfaction and complaints

As explained above, the project has experienced a higher number of participants dropping out than was envisaged. There is an ongoing programme of engagement designed to minimise dropouts; this has been refined on an ongoing basis, based on feedback from participants and partners, and has contributed to participant attrition being minimised following trial 1 installations. (Between May 2016 and May 2017, the only participants dropping out were ones who either moved home or changed supplier, making them ineligible to take part in the project – both factors outside the project's influence.) Key learning points are presented below.

9.5 Participant attrition – conclusions

The project technologies and their installation proved to be a major factor in participant attrition. Technical issues with smart meter installation led to some participants being disengaged. However, more participants were disengaged because they refused to book an installation or refused access to installers. This was compounded by participants' perception of the hassle involved with the installations and broader concerns around the different project technologies and their use in research. These concerns led participants to withdraw themselves from the project, in some cases after a successful smart meter installation. Some of these issues and concerns may have been linked to the fact that participants needed to allow access not just to British Gas but also to PassivSystems. Reducing both the number of interactions and the number of organisations that participants were required to interact with would both increase the project's efficiency and reduce attrition at this stage.

Complications and concerns over participating in a research project were the second most significant cause of participant attrition. The project's eligibility criteria meant participants were disengaged, particularly when they changed energy suppliers or moved house. Participants' understanding of the project led to some participants withdrawing as, over time, they reinterpreted what benefit the project could bring them and what demands it would make on their household. Clearer messaging about the project and what was involved could potentially have mitigated this, with suggestions that a video would be the simplest way to communicate what is a relatively complex project.

<u>Minimising attrition – key learnings</u>

- Provide very clear messages about what is involved in the project, possibly including a video, and ensure consistency of messages across different recruiters to effectively manage participants' expectations.
- Avoid equipment that is outside the scope of the project, which may cause further disruption to the participants. In the case of **energy**wise, issues with the temperature monitoring equipment caused unwelcome disruption for some participants.
- Streamline the installation process to reduce the number of interactions with customers.
- Minimise the number of unexpected interactions with customers in general.
- Keep participants as a whole informed of what is happening in the project.
- Provide participants with an opportunity to get together to share their experiences and learn from each other. Listen to participants about their experiences and take action based on their feedback. Be willing to engage with other household members to explain the project benefits and processes.
- Keep in regular communication with participants to remind them of how useful their involvement is and to thank them for their time – with vouchers where appropriate (e.g. where customers have faced disruption).

10 Participants' Energy Social Capital and changes over time

10.1 Introduction

Social Capital refers to the social networks, trust and reciprocity of a community (collective social capital) or the resources available in a person's social network (individual social capital). The study undertaken in the **energy**wise project researches both individual and collective social capital of the study population, but focuses on one type in particular; Energy Social Capital (ESC). ESC is defined as the information resources related to household energy use embedded in social networks (see McMichael 2011[22]). Here ESC is measured through collecting data on:

- Where participants find energy efficiency information;
- Which personal (and non-personal) sources they use to find information; and
- Who participants trust for advice on energy.

This data was collected through a short self-completion survey designed for the project. Additional insights on trusted networks have been collected through a process of local stakeholder engagement, discussed at the end of this section.

energywise participants will receive three Energy Social Capital surveys during the course of the project. The administration and results of the first Energy Social Capital (ESC1) survey have been discussed in the SDRC 9.3 and the Final Energy Saving Trial report[23]. In this section, the second Energy Social Capital (ESC2) survey is discussed and some comparisons made with the results of ESC1. ESC2 was run towards the end of trial 1, before the start of trial 2. The purpose of this iteration was to

a) generate additional insights on participants' Energy Social Capital; and
b) investigate changes over time in participants' ESC resources and how they are used.

In addition ESC2 included some new questions to get feedback from participants about the project. The results of these new questions are discussed first, followed by a comparison between the results of the two surveys.

10.2 Administration

The ESC2 survey was sent in October 2016 to all 310 active participants (166 intervention group and 144 control group). 141 surveys were received back (76 Intervention and 65 control) (Table 7). This gives a response rate of 45% and is higher than round one, which received a response of 39.7%. The different rate can in part be explained by participant attrition. More people were leaving the project at its start, which has left a smaller and possibly more receptive group of participants.

Table 7: ESC2 surveys

	Total	Control	Intervention
Mailed	310	144	166
Received	141	65	76
Left project	5	2	3
Analysed	136	63	73

Nevertheless, five participants left the project after returning their survey, therefore a total of 136[24] surveys have been analysed for this report, 63 control group and 73 intervention group.

[22] McMichael, M. (2011) Social capital and the diffusion of energy-reducing innovations in UK households. University College London Energy Institute, Bartlett School of Graduate Studies. London, University College London. PhD: 280.
[23] Both reports are available from http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/
[24] The dataset is for active participants as of 27 March 2017

10.3 New questions from the second wave of ESC survey

10.3.1 Attitudes towards the **energy**wise project

ESC2 asked 'how satisfied are you with being part of the project so far? 85% (114) of the respondents were either satisfied or very satisfied with the project (Figure 38).

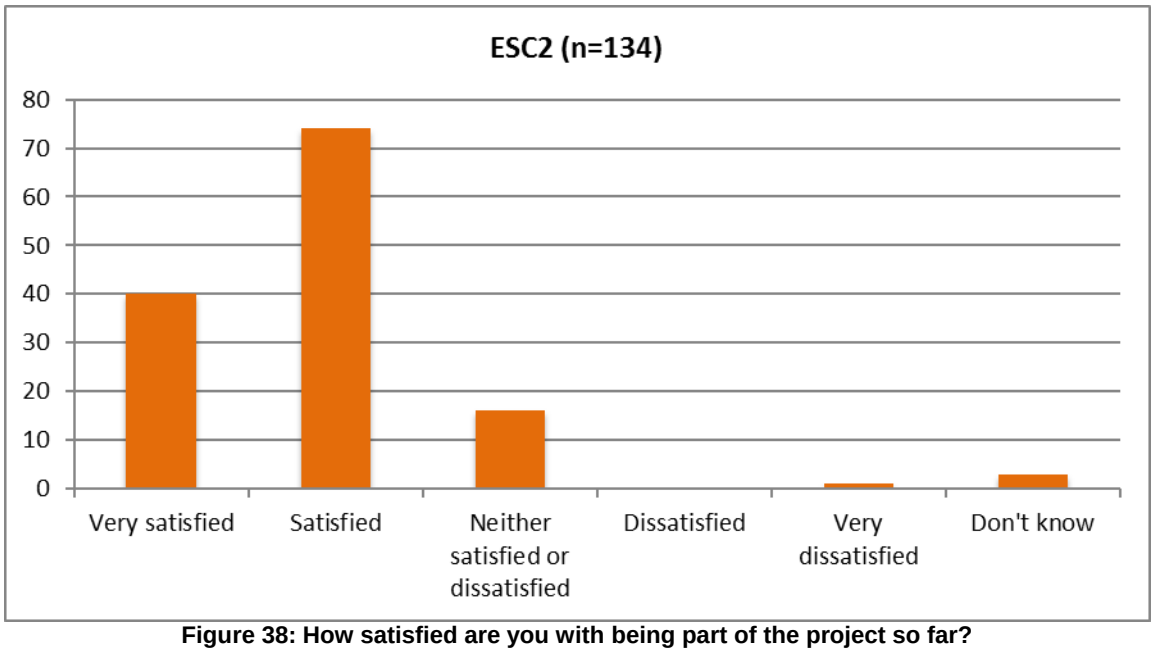


Figure 38: How satisfied are you with being part of the project so far?

10.3.2 Awareness of Priority Services Register (PSR)

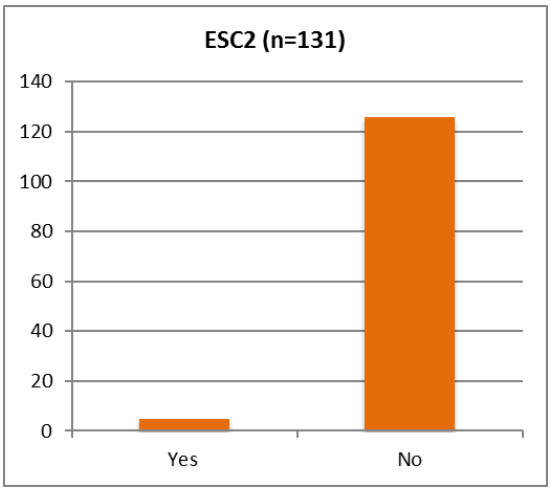


Figure 39:Have you heard of the Priority Services Register?

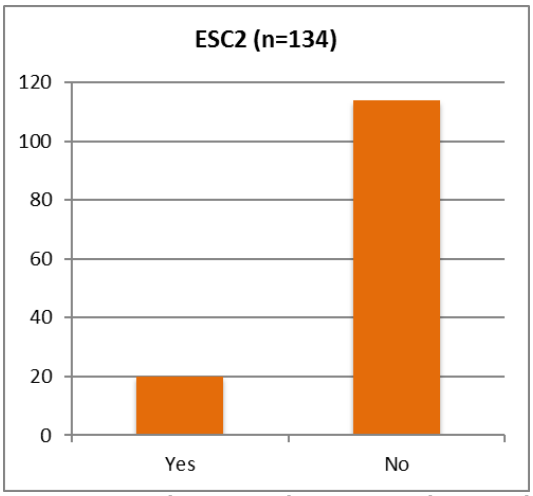


Figure 40: Do you know another energywise member?

ESC2 included questions to assess awareness levels of the Priority Services Register. Figure 39 shows that only 4% (five) of participants had heard of this. These five were asked which organisations' PSRs they were aware of and all ticked British Gas. No respondents had heard of UK Power Networks' PSR. Three specified how they'd heard of the British Gas register. One wrote 'through family and friends', one wrote 'British Gas, I have a son with autism' and one wrote '**energy**wise'. This suggests there is scope for the **energy**wise project to improve the awareness levels of PSR amongst the participants. This question was included to test levels of PSR awareness before the introduction of any PSR awareness-raising activities. The project is now planning activities to promote PSR awareness amongst participants.

Q17, 18 and 19 checked whether participants had other **energy**wise members amongst their social networks or had discussed the project with others.

Figure 40 shows that 15% (20) of the respondents had another **energy**wise member within their social networks. Figure 41 shows that 51% (70[25]) had spoken someone in their social networks about the project, but 46% (63) had not. This pattern changes according to group, 59% of respondents from the intervention group had discussed the project, while only 43% of control group respondents had. This follows the ambition of the research trial design making the project more present for the intervention group than the control group.

Of the 70 respondents who'd discussed the project, 79% (55) had spoken to a family member, 53% (37) had spoken to friends, 30% (21) had spoken to neighbours and 9% (six) respondents had spoken to other **energy**wise participants (Figure 42).

This pattern is similar for both groups. This follows the trend identified in ESC1, indicating that the family is the most frequently cited source for discussing electricity issues and is the primary resource of Energy Social Capital for this group.

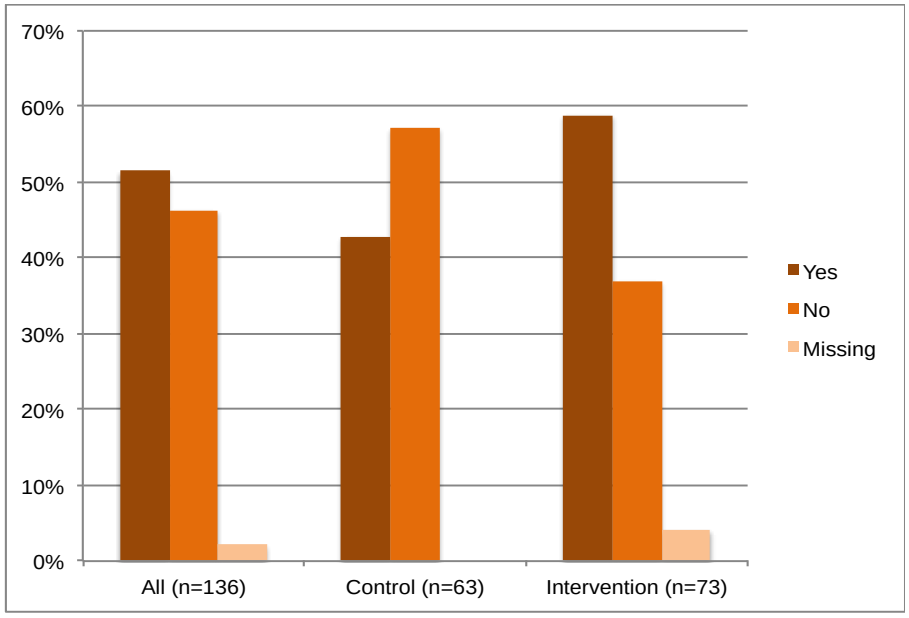


Figure 41: Have you discussed the project with anyone else?

[25] This includes responses from four participants who ticked they then had not had a conversation with about **energy**wise, but went on to specify someone in their network with whom they'd had a conversation about the project.

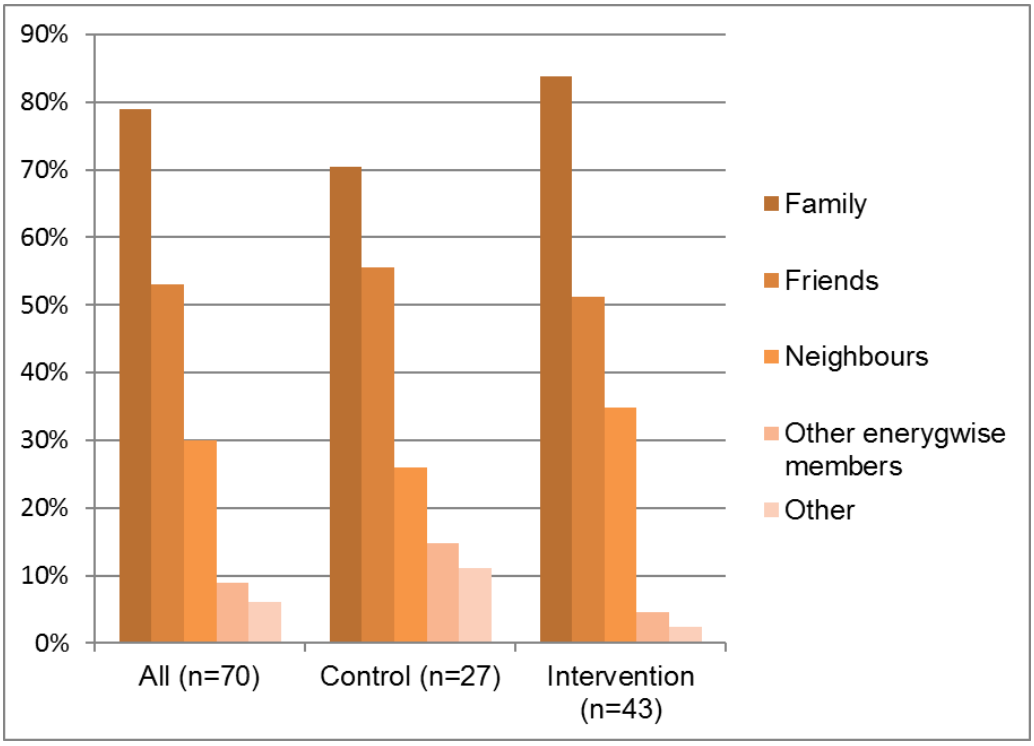


Figure 42: With whom have you discussed energywise?

Summary:

- **energy**wise is viewed positively by engaged members after 18 months of trial activity
- The project can be a source of information about PSR, but currently has not had an impact and awareness levels remain low
- Few **energy**wise members know each other, but discussions about the project tend to happen within the family
- More discussions about the project have been held by intervention group respondents than by control group respondents

10.4 Comparisons and further insights on participants' Energy Social Capital

ESC2 was designed to interrogate further the findings of ESC1 as well as supplement these findings with new insights on participants' Energy Social Capital. This section discussed the new findings and compares them with the results from ESC1.

10.4.1 Energy Social Capital Resources

The ESC surveys identify the form of social capital defined as the 'resources available in a person's network'. The more resources available, the more social capital a person is thought to hold; in this case, the more energy efficiency resources that a person holds, the more Energy Social Capital that person is deemed to have.

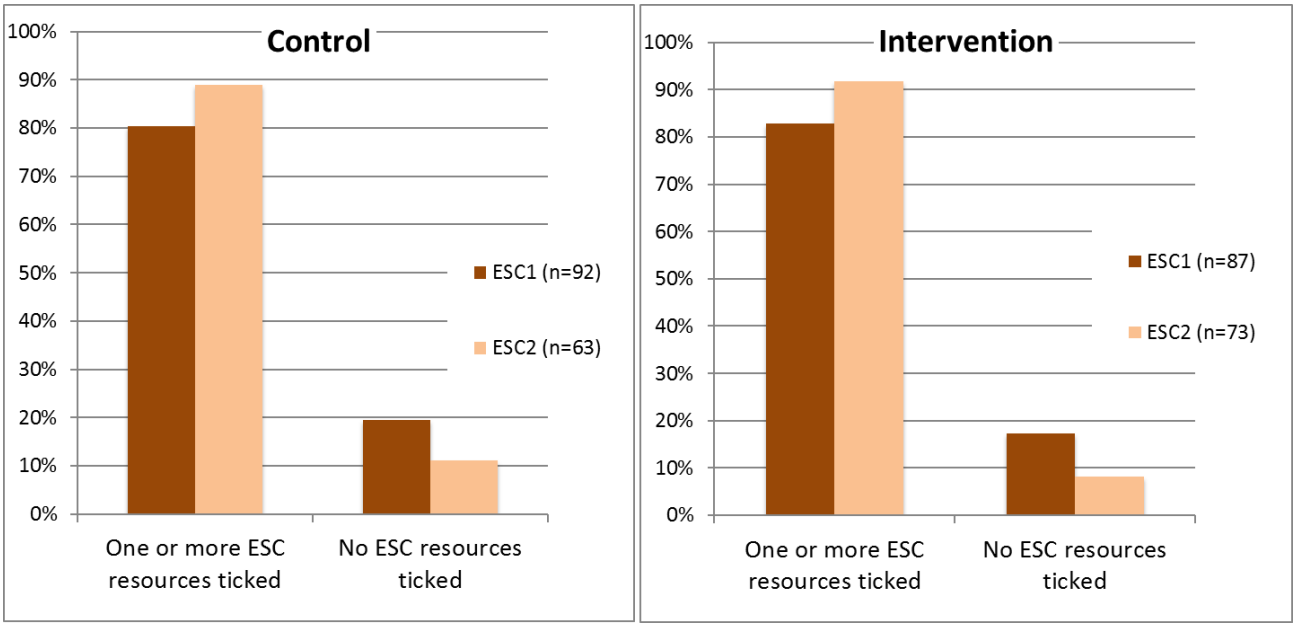


Figure 43: Identifying at least one ESC resource within social networks

Both ESC1 and ESC2 asked participants if they knew people who they could ask about a range of energy related issues. There has been an increase in the proportion of participants who could identify at least one person they knew to ask for information in one of the areas listed. Figure 43 shows that this increase is similar for both control and interventions groups. The proportion of control group respondents who ticked at least one resource and this has increased across from 80% to 89%, and for intervention groups from 83% to 92%.

The surveys investigated what type of ESC resources were held by respondents by asking if they personally knew someone who could give them advice or information on a range of energy related issues. Figure 44 shows the list of issues presented to the respondents and the proportion of respondents that could identify someone relevant to ask about them within their social networks. The results of the two surveys show a difference. There has been an increase in the number of respondents knowing someone who can help them find information on saving energy (from 61% to 72%), who would give sound advice on changing day-to-day activities to reduced energy use (51% to 62%), and who can explain the pros and cons of having a smart meter installed (from 30% to 38%). There have been slight decreases in the proportion of respondents who know someone who can give sound advice on purchasing energy efficient appliances (from 40% to 37%) and on electricity-saving gadgets (from 37% to 35%).

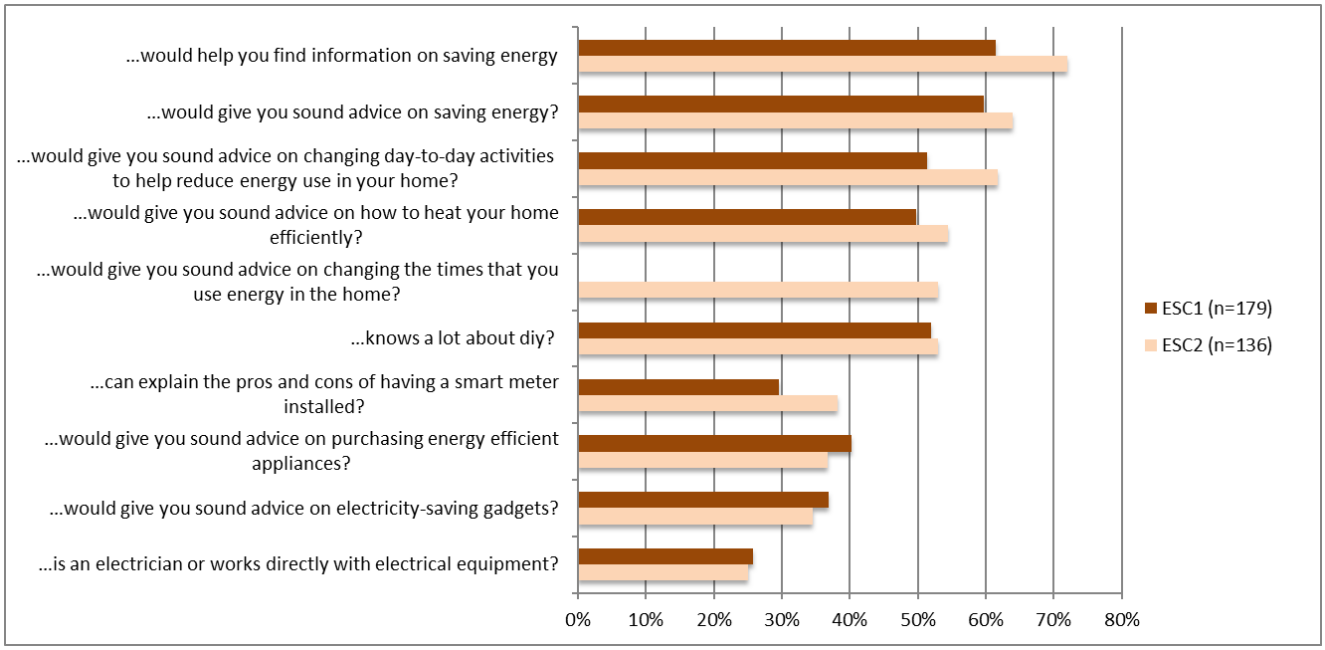


Figure 44: Do you know anyone who...

The changes have not been consistent across control and intervention groups. Figure 45 shows the different trends for the three ESC resources, but shows that both groups have seen an increase in the number of respondents who feel they know someone one who can explain the pros and cons of having a smart meter installed.

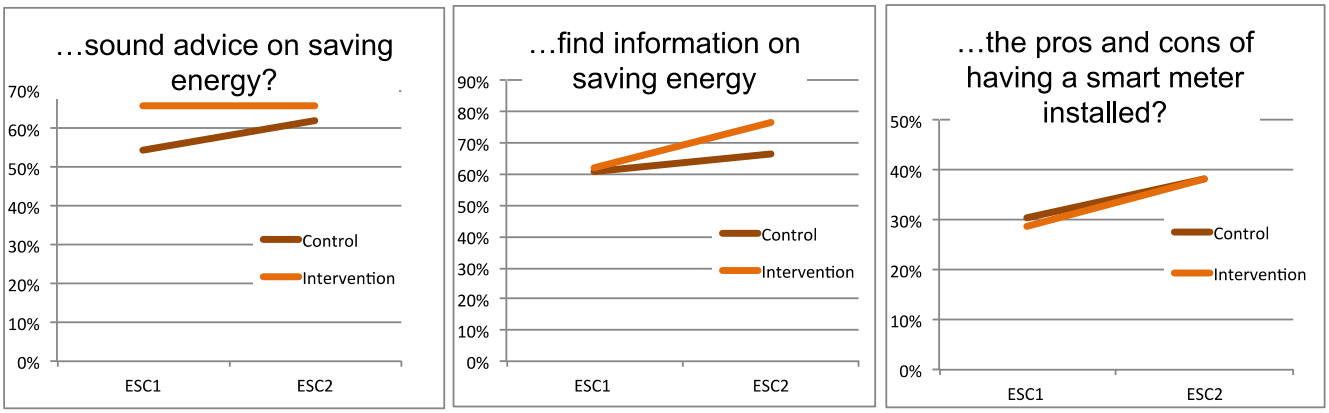


Figure 45: Changes in ESC resources over time by group

The surveys asked people to specify where within their social networks these ESC resources lie. As explained in SDRC 9.3 report for all categories the primary source of information was within in the family, followed by friends. 'Other' became a noticeable resource only in the case of smart meters, where more ESC1 respondents ticked 'other' over 'friend'. ESC2 has generated a slightly different picture of the distribution of ESC resources amongst respondents' social networks.

Figure 46 shows that 'other' is still the second most important resource for learning about smart meters; but it has fallen from being a resource cited by 31% of respondents to one cited by 21%. In comparison family has increased from 37% to 44%. This could be because with experience of a smart meter respondents found that family members were useful resources in figuring them out, rather than turning to an external source for support.

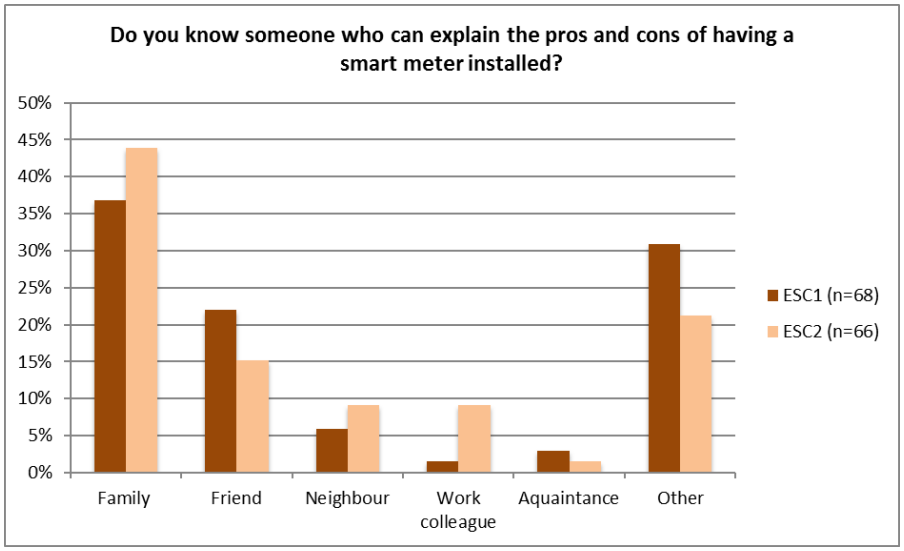


Figure 46: Changing distribution of ESC resources within networks

ESC2 included an extra energy issue in this question and asked respondents if they knew anyone who could give them advice on changing the times they use energy at home. 53% (72 people) said they did. This is more than those that knew someone who could explain the pros and cons of having a smart meter installed (38%), or give advice about energy saving appliances (37%) and gadgets (35%) (Figure 44). None of the participants were on time-of-use tariffs and the survey was run before recruitment onto trial 2 had started. This question asks people if they know where to turn if they wanted to find out information, in other words it identifies hypothetical resources, not those that have been operationalised by the participants. The third wave of the survey will run towards the end of trial 2 when participants have had a motivation to change the time of day when they use electricity. It will provide insights on whether or not these hypothetical resources are put to use.

10.4.2 Information seeking on electricity

The surveys have identified changes in how people put their ESC to use. Respondents were asked to think whether they'd discussed electricity with people they know in the past six months. ESC1 captured the six months prior to the start of the project and show that 45% (80) had had a conversation with one or more people they know in the last six months about electricity, while 45% (81) had not spoken about electricity in the past six months.

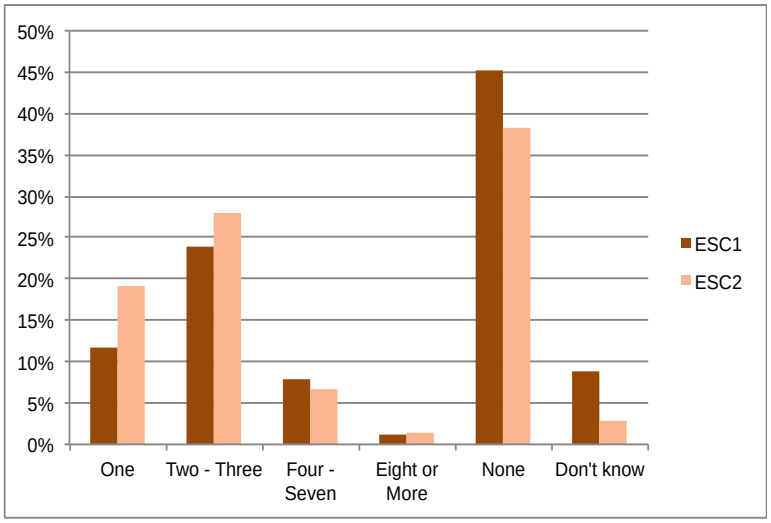


Figure 47: How many people have you discussed electricity with in the past 6 months?

ESC2 captured six months of trial one. During this period there has been a drop in the proportion of respondents who have had no conversations (38%) and an increase in the proportion that have discussed electricity with one person (19% of ESC2 respondents) or two to three (28%).

Table 8 shows the percentage change for the two groups. The control group have seen a slightly greater increase (+10%) in the number of respondents who've spoken to one person in the last six months.

Table 8: Changes in number of conversations by group

How many people have you spoken with about saving electricity?	Control	Intervention
One	10%	5%
Two – Three	3%	5%
Four – Seven	1%	-4%
Eight or More	-1%	2%
None	-8%	-6%
Don't know	5%	1%

Although there has been a small increase in the number of conversations people have had since the project started, the people that participants discuss electricity do not seem to have changed.

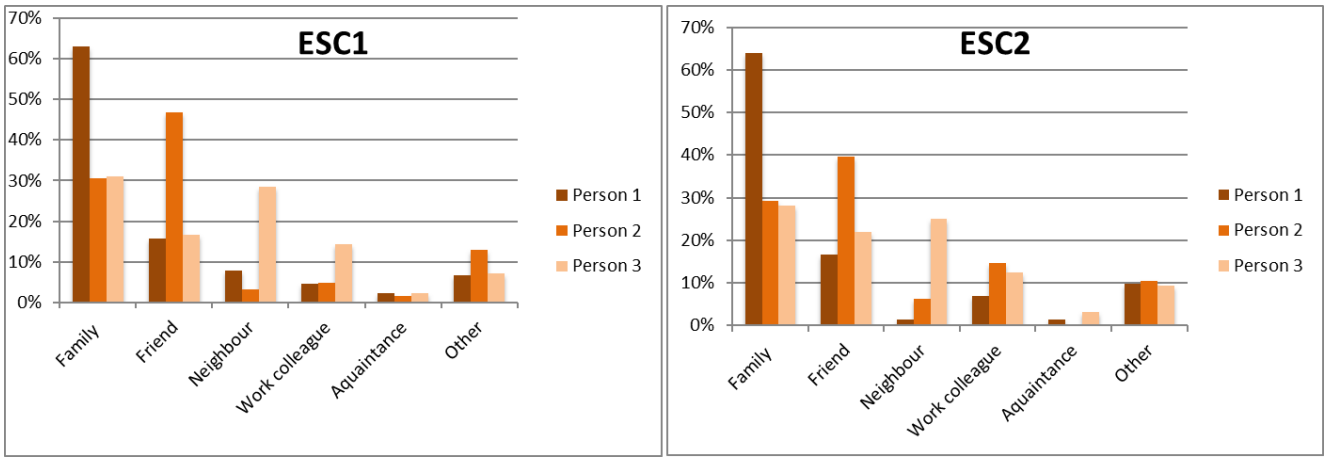


Figure 48: People spoken to about electricity in the last 6 months

Figure 48 shows that at the start of the project the people had had conversations with a family member. If they'd had more than one conversation, it was likely that the second person would be a friend. Results from ESC2 confirm that most conversations about electricity are still amongst family members for the respondents.

ESC1 asked where participants would turn if they had a question about electricity use in the home and found the majority of participants (37%) would turn first to an organisation or group, rather than someone they knew (34%), or check the media (29%). In comparison, ESC2 found that more respondents would turn first to someone they knew (42%) rather that check the media (26%) or turn to an organisation (23%).

The changes are different according to group. Both groups have seen an increase in the proportion of respondents who would first approach someone they know to find information and a decrease in the proportion who would first turn to an organisation or group. These changes have been greater in the control group than the intervention (Table 9). There has been a reduction in the control group respondents who would first turn to the media, but an increase in the proportion of intervention group respondents who would.

Table 9: Changes in first sources of information by group

	Control	Intervention
Ask someone I know	16%	10%
Check media sources	-4%	5%
Approach an organisation or group	-14%	-6%

ESC2 investigated the ESC1 finding further with a question that disaggregated the kinds of organisations that people would approach. Q7 asked 'If you would approach an organisation or group about electricity use, which type would this be? Respondents could pick as many options as applied.

- British Gas (or another power company);
- Distribution Network Operator;
- local council;
- social landlord;
- community-based organisation or centre; or
- other.

Of the 23% respondents who ticked that they would first approach an organisation a majority would approach British Gas. This finding corroborates qualitative insights generated from the participants' panels that generally this group feel British Gas is a dependable organisation in comparison to other companies in the energy market. Four respondents ticked 'other', and three provided clarifications in the text box. One wrote they would turn to a family relation, a slight misinterpretation of the question. Interestingly two indicated they would turn to **energy**wise. The field officer team were referred to in 12 other open text fields, relating to where people received tips, or how they find out about information. If participants now see **energy**wise field officers as useful resources of Energy Social Capital within their networks, this may account for the increase in participants selecting 'ask someone I know' in response to Q6 in this iteration of the survey. This will require further research to investigate how people classify **energy**wise, and how the team is fits into the participants' ESC resources.

Respondents were asked if they actively seek information about electricity and energy efficiency. ESC2 results suggest there has been an increase in those that actively look for information from 13% of ESC1 respondents to 21% of ESC2 respondents (Figure 49). While the proportion of those who said they 'don't get tips or advice' has fallen from 21% of ESC1 respondents to 15% of ESC2 respondents. Those actively looking for information has gone up during the project, but there has also been a slight increase in those who don't know from 7% to 11%. This may indicate some confusion around being part of the project and receiving information about energy, which they have not directly looked for.

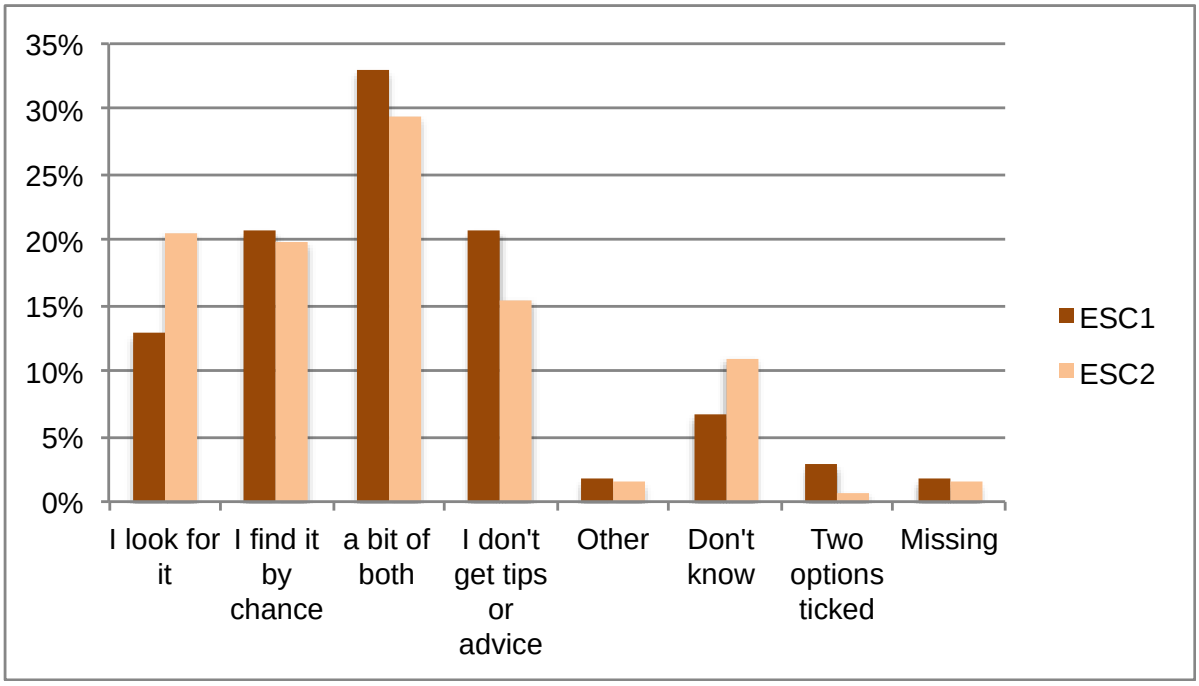


Figure 49: Where do you look for tips or advice?

These changes differ by group (Table 10). Control group respondents show an increase in those who actively look for information (+13%), but also a decrease in those who feel they don't get tips or advice (-6%). In comparison intervention group respondents have seen a smaller increase in those who look for information (+3%), and a smaller decrease in those who feel they don't get tips or advice (-4%). The intervention group show a small decrease in those who feel they find information by chance (-3%), while this proportion has slightly increased in the control group (+1%). These different changes in information seeking may indicate that intervention group respondents feel they are receiving information through the project, while control group members feel they are not receiving information through the project and are having to look for it, or find it by chance.

Table 10: Where do you seek information?

Seeking information	Control	Intervention
I don't get tips or advice	-6%	-4%
A bit of both	-4%	-3%
I find it by chance	1%	-3%
I look for it	13%	3%
Other	-4%	-1%

Summary

Resources

- Energy Social Capital resources have increased amongst both intervention and control groups.
- The family continues to be the most important ESC resource for both groups.
- There has been an increase across both groups in the proportion of respondents who now feel they have someone knowledgeable about smart meters within their social networks and for the majority this person is a family member.

Information seeking

- More respondents now report having had a conversation about electricity in the last six months, and these conversations are still largely amongst family members.
- More respondents are actively seeking information about electricity, and this increase is predominantly amongst control group respondents.
- There has been a decrease in the number of respondents who would first turn to an organisation to find out about electricity and an increase in turning to a person known to the respondent.
- For those respondents who would first turn to an organisation, they would turn to British Gas.
- **energy**wise is identified as a source of information explicitly by two respondents, and referred to by 12 others.

Concluding points

Comparing the findings between ESC1 and ESC2 shows that the family is the most important source of information about energy for the project participants.

ESC2 found that the family:

- is still the most important ESC resource.
- is still the most frequently cited discussant when referring to actual conversations that have taken place.
- has become a source of knowledge about smart meters for more respondents.

ESC2 has shown a change in where participants would turn first to ask about energy issues:

- ESC1 found a majority would turn to an organisation first.
- ESC2 found a majority would turn to a known person, rather than check media sources or approach an organisation.

This change could indicate that being involved in the project, or receiving smart meters and devices has generated more awareness about energy within the household.

energywise field officers are explicitly mentioned as sources of information by a minority of respondents in both ESC1 and ESC2. Further research could examine in more detail how participants classify the **energy**wise team (for example, whether they classify them as 'someone I know', or as 'an organisation') in order to better understand the type of ESC resource that is being created amongst participants by the team.

ESC2 has found that respondents feel they have someone within their social networks who could help them change the times of day they use energy. ESC3 will have to investigate whether this turns out to be the case when trial 2 asks households to operationalise this ESC resource.

ESC2 has also found a very low level of awareness about the PSR amongst the participants.

11 Learning outcomes

(Please note, a more succinct 'learning points' summary is provided in Appendix A, designed to disseminate key findings to others working in the field.)

11.1 Learning Outcomes: Customer Selection

No.	Lesson Learnt
L1.1	**Selection criteria – main trial:** In addition to the inclusion criteria for eligible households reported in SDRC 9.1 and 9.2 reports[26]: • A series of additional criteria were identified by project partners for exclusion of households from the project, for example leaseholders, those with energy efficiency improvements since October 2013 or planned over the course of the project and those in homes scheduled for demolition (11 criteria in total). The purpose of these criteria was to ensure: a) that the data would not be affected e.g. by energy efficiency improvements; b) householders were selected where there was smart metering solution available; c) the householder would remain eligible to take part in the trial; and d) where possible, customers who may be adversely affected by participating in the trial (such as those reliant on electrically operated medical equipment) were not invited to take part; • An additional series of 11 exclusion criteria were applied by British Gas, including households with a theft history, those that had requested not to receive marketing materials and those with a change of tenancy in progress. The result of this was that the pool of eligible households from which to recruit was smaller than expected – 1,352 rather than the target of 1,650.
L1.2	**Measures to help identify eligible participants** Where public data on income and fuel bills is not available, proxies can be used to identify fuel poor customer such as social housing tenants living in lower efficiency homes in areas of high deprivation. Minimise exclusion criteria to maintain the biggest possible pool of potential participants. (Restricting participants to tenants of two social housing providers limited the number of households who could be approached.) Issue clear expectations to partners at the project outset about the data required and the format of this – reduce the number of iterations required. If using EPC data, consider purchasing this rather than requiring partners to supply it, as they may not have it in an easily accessible format. Allow for high numbers of dropouts after sign-up. For long duration projects, take into account that people may change supplier. Having the full list of eligible participants to approach at the outset of the recruitment would be better than getting this in a trickle.

11.2 Learning Outcomes: Customer Recruitment

L2.1	**Method of sign-up to the project – trial 1** The majority (82%) of participants signed up after receiving a door knocking visit with 81% of these signing up within three door knocks. This demonstrates the importance of introducing face to face interaction with potential participants (for instance, having CFOs interacting face to face at the door step or offering face to face support). Many said the invitation letter was an important precursor to

[26] Available from http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

	this (though not enough, on its own, to persuade most to signup; only 17 signed up after receipt of the letter). Other sign-ups came from phone calls; out of the 175 participants signing up through this route 94 (90%) signed up after three of fewer calls. Only a handful of participants requested a booked home-visit, with only three sign-ups through this route, and no-one attended the drop-in event (despite, following experience on the pilot phase, the event being clearly advertised through a separate leaflet and marketed to those living closest to the venue). Door knocking was effective, but time consuming, particularly since the project was not area-based[27]. Evenings and weekends worked particularly well. This was particularly true for properties with door phone entry systems where it was not possible to leave a 'sorry we missed you' card; people were generally more likely to be home at these times. (Please note that a different approach was adopted for trial 2, since people were already engaged, with phone calls being used first and door knocking only when it was not possible to get hold of participants by phone. Phone calls are less resource intensive than door knocking.)
L2.2	**Maximising sign-ups to the project** Having recruiters working in pairs, involving a diverse team, was effective. (Some customers are more comfortable talking to a woman.) Having a field officer working alongside a British Gas engineer worked well in terms of persuading people to sign up during the MDU recruitment phase. Where possible, have pairs working together throughout the recruitment period in the same neighbourhood so they can develop a rapport with their targeted households. When door knocking, field officers should: • Leave a 'sorry we missed you' card and leaflet when a customer is busy and unable to talk • Be patient and wait for five minutes between door knocking and leaving the property (as some households may need some time to come to the door, e.g. those with mobility problems). • Reassure customers if concerns are raised about affiliation with any political party. There were various challenges to the door knocking, including the logistics of planning visits to disparate addresses. To maximise efficiency, customers should be targeted in geographical clusters to minimise traveling time. Careful planning of recruitment, and particularly of any door knocking, around local festivals or traditions is important. In the case of **energy**wise, avoiding the Ramadan period would have made it easier to recruit participants more quickly. In addition to project badges, use of uniforms can increase recognition and trust. Highlighting the benefits for participants is key: the CFO should try to stress they are not trying to sell anything and should reiterate the benefits to taking part, whilst maintaining a non-intimidating tone. For trial 2, participants were found to respond better to calls from the field officer team (which appear on the phones as a local mobile number) than British Gas (which appeared as an 0800 number).

[27] Customers were located within one London borough but were spread out within that borough rather than being located within one small geographic area.

L2.3	**The CFO team** It is beneficial if the CFO team is chosen in line with the demographics of the targeted customer group (culture, ethnicity, background, local area knowledge, language etc.) as the customers may feel familiar with engaging with the team and achieve the level of trust required for effective engagement. Having CFOs who speak locally-spoken languages significantly supported participant recruitment. Feedback demonstrated that they responded positively to the CFO team and the use of locally spoken languages (particularly Bengali) was helpful in communicating successfully with participants, some of whom spoke little or no English. In order to be effective, the following skills have been identified as being required by the team members and manager: • communication and influencing skills; • sociological and psychological skills; • experience with local demographics and culture; • data analysis skills • IT skills and experience with data privacy issues; • management experience (for the CFO Manager). Participants were generally very positive in their feedback about the CFO team. Successful engagement is supported by the CFO team ensuring that they put in place the following: • let customers know about the range of partners involved; • vary the approach to the customer; e.g. younger people generally want less detail and more opportunity to ask questions, whilst older people may require discussion over the project materials in more detail followed by a question and answer session; and • vary the approach according to the customer, reading body language and adjusting approach accordingly. The following training is recommended for teams undertaking commercial campaigns related to energy efficiency and demand side response: • relevant technologies; • research methods; • communication and facilitation skills; • safety protocols and culture; • the recruitment approach, including role play shadowing for the recruitment approach; and • data privacy and the Data Protection Act. Trial 2 recruitment benefitted from the high levels of trust that had been built up between participants and the CFO team.
L2.4	**CFO Manager** Having an effective on-site CFO Manager is essential to the smooth operation of a project such as this. It was originally planned that an appropriately skilled CFO Manager would be in post for the full duration of the recruitment and installation phases, to ensure effective management of these critical phases, including efficient coordination between team members and consistency in the communication of key messages. The original **energy**wise Bromley by Bow Centre CFO Manager left in July 2015. Bromley by Bow Centre experienced delays in replacing the role and a new project manager was officially appointed in May 2016. This contributed to some delays in coordinating and implementing the project instructions, developing the required tools to capture and evaluate data, and to adjusting the recruitment strategy in real time based on experience. However, Bromley by Bow Centre demonstrated a positive attitude in offering extra support to mitigate this issue with the role of interim CFO Manager being shared amongst senior managers at the Centre with support from UK Power Networks.

L2.5	**Participant database** It was originally intended that a participant database would be set up at the start of the project that would enable the accurate and detailed recording of information about those approached and those signed up to the project. It was intended that this would evolve with the project. However, the tracker that was set up initially proved not be fit for purpose and required improvements over the course of the trial 1 recruitment and installation phase with support from other partners with stronger data management skills. The recruitment partner should have excellent data management and analytical skills to enable high levels of data accuracy and the ability to amend the recruitment schedule as necessary, based on the success of different approaches. In addition, a database that enabled simultaneous updates by multiple users would have improved the team's efficiency, as would electronic capture on the doorstep. This can be difficult to set up when more than one organisation is involved in the process.
L2.6	**Recruiters** The project requirements for trial 1 recruitment phase were to scale up the core CFO team hiring three additional recruiters that could support the recruitment activities. Due to delays in scaling up the CFO resources required, the involvement of a wide range of individuals in the recruitment of participants was required – over twenty individuals in total from five different organisations (Bromley by Bow Centre plus staff from UK Power Networks and Tower Hamlets Homes and specialist recruiters Groundwork and Sustainable Home Survey Company.) Bringing in specialist recruiter teams to sign-up customers was effective in securing sign-ups. However, these recruiters inevitably had less training on the project and processes than the CFO team and questions were raised by some partners about whether some of the accuracy of the messaging was lost resulting in some participants refusing access to PassivSystems (as they were not aware the installation was required). Although this was not ideal, Bromley by Bow Centre senior representative stepped in to coordinate the external recruiting agencies' activities with the internal CFO team's tasks. Having a smaller team of recruiters with regular refresher training and meetings to share learnings, organised by the CFO Manager, may have been more effective. Quality assurance of the door knocking could have helped to ensure accurate messages were communicated.
L2.7	**Project website** The website can prepare the way for the door knocking activity and also support the trust-building exercise with the CFO team. As a project in the public domain, including the photos and names of the CFO team generate the impression of a legitimate exercise with commitments that will be met. It is recommended that a project website is designed and maintained for future customer-engagement projects. However, participants on this project did not choose to signup via the project website, and the CFO team indicated that internet access amongst the target audience was low. This was therefore not used as a recruitment tool in trial 2.

L2.8	**Interactions before sign-up to the project** When planning the recruitment phase, some participants will need to have several interactions with the CFO team before they are willing to sign-up. Therefore, in order to achieve high sign-up rates, projects should plan to have to interact with participants on several occasions. Whilst two thirds of participants had two interactions with CFOs before signing up and 90% of participants signed up after three of fewer interactions, 3% of participants required more than four interactions before they agreed to sign-up.
L2.9	**Reasons for sign-up to the project** It is important to understand what messages resonate within a certain community and to have a trusted CFO team with local intelligence and customer engagement expertise who can communicate the benefits of taking part effectively. For a complex project of this nature, participants may have different reasons for taking part. For most participants, the main reason for taking part in the project was the chance to reduce their energy costs. For some, the main reason was better visibility of their energy use via a smart meter installation or the offer of free devices. Secondary reasons included the offer of free energy efficiency devices and taking part in an interesting project. Some customers also signed up to the project in order to receive a smart meter installation from British Gas.
L2.10	**Reasons for not signing-up to the project** It is also important to understand the reasons why some will not sign-up to a project of this nature; this provides useful learning for other energy-related projects. 43% of those invited to take part were either not interested in taking part in the project or were ineligible. 13% were ineligible (because they were moving house or changing supplier), while the primary reason given by those who did not want to take part was simply a lack of interest in the project (with primary sub-reasons being too much hassle, being sceptical of change or too busy). 5% stated they were not interested in having smart meter, and 4% said that they did not want to take part because their bills were already low.
L2.11	**Communication message and materials** Message Low income customers are likely to be primarily motivated by the prospect of saving money on their bills. The offer of free energy savings devices and shopping vouchers can also encourage people to take part. In the case of smart meters, better visibility of energy costs and easier top up methods for prepayment customers are the key features that make them attractive. Design Professional, well designed materials are essential. Some participants said they felt the messaging could have been made clearer with the addition of pictures or diagrams and information (for example in the welcome pack) about what would be installed and by whom. In addition, the CFO team suggested that the target population may prefer pictures and diagrams over text-heavy materials. This was taken on board for trial 2 recruitment and communication materials for this phase of the project were well received, particularly the shifting advice. Warm up marketing Having some warm-up marketing from the housing provider before the invitation letter was sent may have resulted in higher sign-up rates. Branding and project name Some participants felt that the branding was too corporate and could be mistaken for EDF Energy. Some assumed, from the project name '**energy**wise' that the letter was from another energy supplier and was about switching, and threw it away without reading it. Having a name without energy in it,

	or having British Gas's logo more prominently displayed, would have assured recipients that the project was not about switching. Testing materials Testing the message and materials through focus group(s) before finalising will help to ensure that the final materials are clearly understood and well received. Project envelopes During the pilot stage, some customers suggested they would only open a letter if it was clearly coming from their social housing landlord; the logos of the two social housing providers were therefore added to the envelope. Key facts document The script for this was longer than ideal, but this was largely due to the research nature of the project and the different partners involved. Some customers did not have time to listen to the whole document being read out; instead, the key points were provided to customers who were also referred to the Terms and Conditions. The call scripts for trial 2 were longer than desired in order to accommodate the key facts of trial 2. Explaining complex offers Some aspects of the project have proved quite difficult to communicate over the phone or in written communications. Feedback from the organisations involved in recruiting the customers onto the new tariffs suggested that in some cases it may be difficult to effectively communicate the new offer over the phone or in written communications, particularly when this requires a longer interaction. When communicating a novel or relatively complex offer such as Bonus Time to a vulnerable audience, text should be kept to a minimum and images used as much as possible. Face to face interaction should be offered where possible to explain the concept. Videos may also be helpful. Terms and conditions During the pilot phase, customers were confused by the seven day cooling off period after consent, given that they could also leave the project at any time. This cooling off period was therefore removed.
L2.12	**Method of sign-up to ToU tariffs** • **HEFT** participants: 51% signed up through the initial call from British Gas whilst 49% signed up after support from the customer field officer team as well as a call with British Gas. • **Bonus Time** participants: 66% signed up after talking to the customer field officers while 36% signed up during the initial call with British Gas. (The process was simpler than for HEFT as participants could provide consent to either British Gas or the field officer team, whereas for HEFT they had to provide consent to British Gas).

L2.13	**Interactions before sign-up to ToU tariffs** The trial 2 recruitment process was resource intensive. The different offers (HEFT and Bonus Time) and groups (control and intervention) required different customer journeys and different levels of interaction with the field officers and British Gas. This resulted in some participants being contacted several times. Wherever possible, the customer journey should be streamlined. Where contact is needed from two partners, ideally there should be a system to transfer a customer straight from one to the other. (This was introduced on **energy**wise in the later stages of trial 2 recruitment.) • **HEFT** participants: 51% of those who signed up did so during the first three contact attempts by British Gas phone call; 18% during the first call, 15% on the second call and 18% on the third call. 20% of those who signed up did so after five contact attempts, with 5% signing up after 10 or more contact attempts (indicating the resource intensive nature of the sign-up process). 6% signed up after a door knock. • **Bonus Time** participants: 45% signed up during the first three contact attempts with all participants signing up within nine or fewer contact attempts. (As mentioned above, the process was simpler than for HEFT as participants could provide consent to either British Gas or the field officer team, whereas for HEFT they had to provide consent to British Gas).
L2.14	**Reasons for signup to ToU tariffs** Those at the panel and interviewed said that they signed up to take part in trial 2 because: • It was an attractive offer (all participants, though credit customers generally felt they were more likely to save money through HEFT than prepayment customers did through Bonus Time; many of the latter felt the savings were likely to be small). • They liked the idea of being involved in something novel/challenging (some participants).
L2.15	**Reasons for not signing-up to ToU tariffs** Of those saying no to trial 2, the majority did not give a specific reason, but some credit customers said they didn't want to switch to HEFT either because their bills are generally low or they don't use much electricity. One said no because he believed the trial to be a trick. Of those saying no to receiving Bonus Time notifications, half (three) said no because they felt they were too busy to take part.
L2.16	**Scope for Improving the recruitment approach:** Some had initially thought the letter was about switching energy provider and had discarded it on that basis. Suggestions for improving the efficiency and cost effectiveness of the recruitment included: • Additional messaging with pictures and information what will be installed and by whom; • For door knocking, pair a CFO from Bromley by Bow Centre with someone from either their energy supplier or the housing provider to maximise take-up – and ideally also have a male/female pair; • Have a smaller team of recruiters with a higher level of training, including refresher training, and quality assurance of the door knocking to ensure accurate messages are communicated; • Electronic capture of data at the doorstep to improve efficiency and data accuracy to improve the efficiency and accuracy of data capture; For trial 2 recruitment, where possible have flexibility in terms of who the participants can provide consent to or enable automatic transfer of participants from one partner to another where this is not possible. (In the case of HEFT, which constituted a tariff change, consent had to be provided verbally to British Gas.)

11.3 Learning Outcomes: Customer Engagement and Support

L3.1	**Project dropouts** In contrast to the high response rate achieved the project has suffered substantial dropouts prior to and during the trial 1 installation phase, with 258 confirmed dropouts reported to the project by 12 June 2017. These can be split into: • Customers asking to withdraw from the project (127 customers); and • Customers being disengaged by the project (135 customers, four of whom also asked to withdraw). For trial 1, around half of these customers dropped out after receiving the trial terms and conditions, with 1 in 7 dropping out upon confirmation of the installation appointment, 1 in 5 dropping out upon installation and 1 in 10 dropping out after installation. The single main reason for customers being disengaged by the project was that participants changed supplier. A range of problems associated with accessing homes and problems with installing smart meters and other project equipment contributed to the majority of other disengagements[28]. The two main drivers for customers choosing to withdraw were customers changing their minds about the project and the perceived hassle of the installation process (linked to the disruption to participants caused by the difficulty in scheduling simultaneous installations of the smart meters and temperature loggers/Navetas loop monitor). This may be down to the success of recruiting process in that it was able to persuade some households to participate who were only marginally interested in trial, and who took the opportunity to withdraw when they were next contacted (for installations). Keeping the message consistent and coming from one single team of recruiters, all trained to the same level, may help in increasing retention.
L3.2	**Minimising dropouts** Participant attrition can be minimised by: • Providing very clear messages about what is involved in the project, possibly including a video, and ensure consistency of messages across different recruiters to effectively manage participants' expectations. • Avoiding equipment that is outside the scope of the project, which may cause further disruption to the participants. In the case of **energy**wise, issues with the temperature monitoring equipment caused unwelcome disruption for some participants. • Streamlining the installation process to reduce the number of interactions with customers. • Minimising the number of unexpected interactions with customers in general. • Keeping participants as a whole informed of what is happening in the project. • Providing participants with an opportunity to get together to share their experiences and learn from each other. Listen to participants about their experiences and take action based on their feedback. Keeping in regular communication with participants to remind them of how useful their involvement is and to thank them for their time – with voucher where appropriate (e.g. where customers have faced disruption).
L3.3	**Participant interviews as point of escalation for project issues** Participant interviews, designed to evaluate the effectiveness of the recruitment approach, have proved useful in flagging up a number of issues. The project learned that not all problems are reported to the **energy**wise CFO team. For example a few participants reported they were experiencing some problems with topping up prepayment gas smart meters whilst in the trial 2 interviews, it was identified that a couple of participants had misunderstood how the Bonus Time tariff worked. For the former, participants were referred to British Gas while the latter received a phone call from the CFO team to go through Bonus Time with them. In addition, a text was sent to all Bonus Time participants asking them to confirm their understanding of the tariff; this only elicited a response from a few participants,

[28] The full set of stated reasons is: Intake cupboard inaccessible, Fusebox inaccessible, Safety concerns, Not enough space for Smart meter, Intake cupboard unlocatable, Meter impaired, No GSM signal (relating to the PassivSystems temperature monitoring kit), Meter inaccessible

	the majority of whom confirmed their understanding was correct. Two participant responses indicating they misunderstood the tariff and they also received phone calls from the CFO team to go through Bonus Time with them. Further explanation was provided in the **energy**wise newsletter.
L3.4	**Ongoing engagement – participant panel** It proved harder than anticipated to recruit participants to become members of the customer panels. An invitation to all participants in the Welcome Pack to apply to join the panel elicited no responses, and a considerable amount of CFO time was required to recruit customers to the two panels (intervention and control groups). This was despite a £30 voucher being offered to those attending. At most panel meetings, several participants who had said they would attend did not show up on the day, resulting in around six participants at each panel (versus a target of 10-12) – with the exception of the April 2017 credit group meeting which had 12 participants. However, despite these challenges, the panels have proved to be a very useful forum in gathering participant feedback. Participant panels are an effective means of identifying any issues or concerns amongst participants and thus enabling action to be taken to increase engagement. For example, it was identified through the summer 2016 control group meeting that control group participants were frustrated at having to wait so long for their energy efficiency devices; delivery of these devices was therefore brought forward.
L3.5	**Ongoing engagement – other mechanisms** Partners have identified a number of key learnings to maximise ongoing engagement of participants: • Keep in regular communication with participants to remind them of how important their involvement is (e.g. through a quarterly newsletter) and to thank them for their time – with vouchers where deemed appropriate (e.g. where many customers have faced disruption due to problems with temperature monitors); • Use learning from early stages of the project to improve the process later in the project; e.g. on **energy**wise, trial 1 learning in terms of equipment installs for the intervention group have been used to improve the experience of control group customers in trial 2 (for example by arranging caretaker access ahead of the installation visit, where necessary, to facilitate meter access); • Minimise customer interactions and 'hassle' to minimise dropout rates, e.g. by getting different parties to work together to attend a household at the same time where possible. Some examples of the beneficial approach a trusted intermediary can offer: • Bengali speaking field officers were able to tackle language barriers throughout the recruitment phase: • the field officers are aware of locally relevant culture and customs: • Bromley by Bow Centre is well known for its work with the community and its open-door policy – participants find it comfortable and easy to visit or telephone for immediate assistance • at the end of project Bromley by Bow Centre is ideally-placed to continue helping these people where necessary with, for example, support on budgeting, energy efficiency and accessing other support services.

11.4 Learning outcomes: Installations

L4.1	**Appointments** The random allocation of participants, which is in place to ensure robust statistical findings, may slow the installation appointment booking process and affect the effectiveness of the CFO team, but the anticipated benefits in ensuring a statistical sound outcome outweigh the impact imposed on the CFO team. It is recommended that significant attention is paid to the research design in order to maximise the value generated through the project The adopted approach is named as area-led installation approach, where effectively all targeted customers are co-located[29] and is different to the BAU process followed by energy suppliers, where they could be installing consecutive smart meters at customers located in different areas (British Gas for example use a field resource optimiser to ensure the most efficient use of the Smart Energy Expert resources). The tested approach has logistical benefits which may result in increased cost efficiency and resource utilisation if the targeted customers are grouped appropriately and could be an effective method for installing smart meters in numerous homes as part of the smart meter roll out mandate. The CFO team can target certain time intervals (i.e. weeks) in order to maximise the number of installations that can be undertaken by British Gas or their subcontractors and thus increase their resource (i.e. Smart Energy Expert) utilisation. Such benefit will be valuable for the smart meter roll out mandate where a resource intensive exercise is required in order to achieve the target number of smart meter installations in the GB. Offering Saturday appointments can be helpful in getting installations completed within a relatively short period of time.
L4.2	**Installation visits** While it was envisaged that participants would have received one single visit combining both British Gas' and PassivSystems' installations with CFO's visit (aimed at administering the home energy survey to all participants and delivering the energy efficiency devices and advice leaflet to intervention group), this proved impractical due to the levels of CFO resource required plus the different amounts of time required by different partners at the property. Over the course of the project, the team working between the CFOs, British Gas and PassivSystems improved greatly so things ran smoothly.
L4.3	**Installation approach – customer feedback** Most participants interviewed were happy with the installation process, though a minority were not (five out of the 55 interviewed, of whom one was very unhappy, due to problems and delays). British Gas got very positive feedback from customers.
L4.4	**Installation and capture of research data** The CFO team can be instrumental in research trials in terms of capturing valuable insights through customer engagement activities that can inform qualitative research if captured in a systematic and accurate way. In-depth training is required to enable the team to take on this role and all of their research activities need to be supported and quality-checked by an experienced researcher.

[29] Customers are located in the same borough, but are spread out within that borough.

L4.5	**Prepayment meters – customer training on how the vending process works** As there are several ways to top up a prepayment smart meter, the handover of knowledge from the Smart Energy Expert during the installation visit is key to the deployment of smart meters. For instance, it is important that customers are aware that they can always force this payment through to the meter manually if necessary. It is also fundamental that the information is shared among the different household members. It was observed through the participant interviews that for example in one case the person responsible for topping up the meter was not present at the install appointment and their partner, who had been present, did not share this information with them.
L4.6	**Trial 2 installations – building on trial 1 learnings** Where installations need to be completed within a short timeframe, this can be facilitated by ensuring that plenty of weekend appointments are available (though this is cost and resource intensive as it required British Gas to offer their Smart Energy Engineers overtime). British Gas provided the CFOs with appointment slots so they could book installs directly with the participants. (Having both organisations co-located would have further streamlined the process e.g. having a British Gas team member based at Bromley by Bow Centre for the duration of the recruitment and install period would have been ideal.) Navetas equipment was decommissioned at the point of smart meter install, without needing to get PassivSystems involved, thus streamlining the process. The CFOs were provided with a van to deliver the devices, thus making this process much quicker than in trial 1 were they were relying on public transport. Where smart meters are being installed in social housing, the installation process can be facilitated by: • the energy suppliers requesting a list of addresses from the housing provider for which a staff member (e.g. caretaker) will need to enable access; • the energy supplier then contacting the caretaker in advance to request they are present to enable this access at the appointed time.

L4.7	**Scope for Improving Installation Process:** Partners have identified the following options for improving the installation process in any replication: • ensuring a dedicated CFO Manager was in post throughout the installation phase may have improved data accuracy issues and assisted with information capture relating to the delivery of energy efficiency devices; • avoid temperature logging equipment if possible as it has generated many problems. For example, there were problems with equipment falling or being knocked off the wall or other alarms being triggered to indicate the equipment was not working properly (either because participants had moved it or switched it off or for other reasons). If this equipment is necessary, consider having the same organisation installing this as well as the smart meter, or at least brand the other organisation the same, and aim to minimise customer interactions. Also consider having an opt-out option for customers in relation to equipment that isn't core to the project's aims (an option taken up by 13 participants on the **energy**wise project), with consent for this being captured by the CFO team. • co-ordinate all those involved with install/delivery so that they can attend a customer's house at the same time where possible, to minimise the number of customer visits required and the associated hassle (though it is recognised that this is challenging given the different time and other requirements of the different groups). Energy initiatives should assess the level of flexibility required from different organisations in order to maintain customer focus, while making sure that the overall approach is still replicable in the real world outside trial environment; • firm up access arrangements, as there were sometimes challenges getting to meters which required caretakers to enable access. This may have been helped by providing more notice (as was done, successfully, in trial 2 installations); • ensure communication is very clear about what will be installed, by whom and how long this would take. A video to illustrate the process may have helped with this; and • pilot the installation process with a few households and then tweak the process as necessary

11.5 Learning Outcomes: Provision of energy efficiency devices

L5.1	**Uptake by participants** • LED lightbulbs are popular with most participants. In terms of light bulb fitting, bayonet (B22) cap has been observed to be more common compared to screw (E27) cap among pilot study participants. The eco-kettle and standby shutdown are popular with some but not all. • participant feedback suggests that some customers, e.g. elderly people, may have difficulties in setting up/operating the devices; therefore in some cases additional support in installing the devices may help to unlock their full energy saving potential. Feedback has also suggested that some participants are not using their equipment because they don't understand how to use it or they do not like the appearance (e.g. eco-kettle and standby shutdown) or are unable to install it (e.g. LEDs lightbulbs). Training up CFOs to install and demonstrate equipment where possible would increase the level of use of this equipment. • delivery of devices by the CFOs was a challenge as they were quite bulky and the team were travelling by public transport. Providing a dedicated equipment manager with a van to deliver the equipment would make the delivery process more efficient. (This approach was adopted for the trial 2 installations.)

11.6 Learning Outcomes: Energy Social Capital Survey Insights

L6.1	**Administering surveys with field officer support** • To date, a 45% response rate has been observed in the second round of the ESC survey. This is at the very top end of response rates expected for a self-completed survey (Dillman, 2000) indicating the method developed for administration of the survey is sound. • The survey administration was based on the Dillman tailored design method (Dillman, 2000). It involved a pre-survey letter, the survey with an incentive, a follow up postcard and then a phone call reminder from the CFO team. • The phone call allowed for lost or missing surveys to be replaced. • The phone call demonstrated the usefulness of the CFO team's language skills. They could improve participants' understanding of the survey and encourage them to fill in and return the survey. In one or two cases the team provided verbal translations and filled in the survey with respondents. • Projects should allow for replacement surveys to be issued where necessary, with a 'return address if undelivered'. This will ensure higher response rates and demonstrate customer focus. • The project observed a 64% response rate for the face-to-face survey[30] carried out within participants' homes by the CFO team. This higher rate was achieved with significantly higher resources invested. Those replicating the project should evaluate the level of response required to generate meaningful results against the level of resource required to achieve it.
L6.2	**Energy Social Capital Survey Insights:** • The family is the main Energy Social Capital resource for participants. • There are initial indications that the Field Officer team are becoming a trusted source of information about energy and an additional Energy Social Capital resource. Further research is needed to confirm. • There are very low levels of awareness of the PSR amongst participants. Any opportunity such as energy initiatives should be used to promote the priority services offered by the DNOs and the energy suppliers if appropriate. • Participants feel they have Energy Social Capital resources to help them respond to time-of-use tariffs. This will need to be explored further in a later iteration of the ESC survey

[30] This refers to the Home Energy Survey, the results of which are reported in the Final Energy Saving Trial report, which is available from http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

12 Conclusions

The **energy**wise project achieved a 40% sign-up rate, which exceeded the target of 33%, with 82% of these being signed up through door knocks. The diversity of participating households (ethnically and in terms of age provide) demonstrates that the recruitment approach was inclusive. Furthermore, 86% of participants who remained active at the start of trial 2 recruitment consented to take part in the DSR trial. In total, 323 smart meters and smart energy monitors have been installed and 1,879 energy efficiency devices provided.

This shows that the application of best practice social research and project management methods for the recruitment and engagement of participants can achieve high response rates in energy trials. In particular, the following factors contributed to this high sign-up rate:

- working with trusted local intermediaries – a well-known, well-respected community organisation and social housing providers;
- working with a trusted energy supplier which has staff who are highly skilled in engaging customers and gaining access to properties;
- a team of trained, locally based field officers with knowledge of the local culture and languages;
- well designed, tested materials that were designed for the target audience;
- extending the recruitment phase beyond that initially planned and, if necessary, bringing in additional recruiters to sign-up participants;
- face to face engagement with participants to build levels of trust;
- having field officers who are in place throughout the project, enabling them to gain the trust of participants; and
- engaging with customers outside standard working hours (evenings/weekends) both on the initial recruitment and for the installation appointments.

For any project like this one which requires access to customers' homes, it should be anticipated that a relatively high number of participants will dropout, particularly at the very earliest stages. Some participants refused to grant access to have a smart meters and or temperature monitoring equipment installed repeatedly failed to keep scheduled appointments. Amongst other reasons, this may also be related to the success of the recruitment process in persuading some households to participate who were only marginally interested in trial, and who took the opportunity to withdraw when other circumstances (such as issues around installation) presented the opportunity. The technical nature of the project contributed to further dropouts arising from problems with installing meters in some properties or from participants becoming frustrated with the amount of disruption that arose from different equipment being installed by different organisations. The project has minimised the level of attrition by addressing any matters that were leading to potential drop-outs during trial 1. However, natural attrition (resulting from participants either moving house etc.) was unavoidable and higher than expected.

A thorough evaluation of the trial 1 recruitment and installation process was carried out, providing an opportunity to reflect on the project's achievements and identify key lessons regarding into how to improve customer engagement. Partners concluded that the following measures would help to minimise dropouts:

- minimising the number of different interactions with participants, particularly when these relate to an element outside the scope of the project, which participants don't perceive to be providing any benefit to them (i.e., in the case of **energy**wise, the temperature sensors);
- providing very clear messages about what is involved in the project, including what will be installed, when and by whom, possibly including a video; and
- increasing the frequency of communication with participants to let them know what is happening and remind them of how useful their involvement it.

As a result both of this evaluation and ongoing feedback from partners, proactive measures were implemented to maximise participant engagement and minimise dropouts. These included:

- streamlining the installation process to reduce the number of customer interactions; this was implemented part way through trial 1 installations and continued throughout trial 2 recruitment and installations;

- increased operational management of the trial 2 installation phase to enable daily sharing of information between the installation and recruitment partners;
- giving participants the option to opt-out of having the temperature monitoring equipment;
- bringing forward the timeframe for control group participants receiving their energy efficiency devices;
- responding to suggestions made through the participant panels, for example providing further guidance on using the energy efficiency devices via the newsletter; and
- excellent retention work undertaken by the Bromley by Bow Centre CFOs that prevented a number of clients from leaving the project.

As a result of these measures, dropout rates have dropped dramatically since the trial 1 installations were completed, with the majority of dropouts since then being natural attrition (moving house or changing supplier). The project has experienced the following number of dropouts:

- by December 2015 – 167 out of 538 recruited;
- by June 2016 – 209 (an increase of 42);
- by December 2016 – 234 (an increase of 25); and
- by May 216 – 244 (an increase of 10).

The low dropout rate in recent months also reflects the fact that the field officer team is available to support participants throughout the duration of the project; not just during the recruitment and installation phases and are skilled in effective communication about the project and its benefits with traditionally hard to reach customers. The participant panels have also been an important factor, enabling participants to identify any problems or suggested improvements, which can then be acted upon.

Partners are in general agreement that further piloting (including of the installation stage) and regular meetings between recruiters to share learnings and refine the approach would have been beneficial. In addition, having a CFO Manager in place throughout the project, and particularly during the initial recruitment and installation phase (as originally intended) would have facilitated effective coordination of all recruitment activities. Ensuring the recruitment partner had the necessary data management and accuracy skills would also have facilitated recruitment and installation; this could potentially be achieved by offering more support on this in the earlier states of a project or including this skillset in the CFO team from the outset. Having the energy supplier manage the installation process end-to-end, supported by the CFO team in terms of booking appointments and overcoming cultural and language barriers, would have reduced the number of customer interactions required, thus potentially reducing dropouts by minimising disruption for participants.

The Energy Social Capital surveys have shown that during the course of the project there has been:

- An increase in individual level Energy Social Capital. Respondents have identified more resources in personal networks
- An increase in using in individual level Energy Social Capital. Respondents had had more conversations about energy in the six months prior to survey 2
- An increase in individual level Energy Social Capital related to smart meters. More respondents feel they know someone they can ask about smart meters. This increase has been within the family.

These findings add to the evidence on the association between individual level social capital and the adoption of energy efficiency innovations (McMichael & Shipworth 2013). The project has provided continuing, context-appropriate support to **energy**wise participants about smart meters, energy efficiency and maximising benefits of DSR offers. Through this support the project has demonstrated a way to build individual level Energy Social Capital. Other stakeholders could similarly aim to build ESC through their projects in order to support the uptake and effective use of smart meter technology and DSR offers.

Key learnings for others looking to implement similar projects that involve engaging with hard to reach groups would be:

- have a good offer and ensure that customers understand the benefit to them;
- there isn't a one-size-fits-all approach; projects need to be tailored to the local community;

- engage with the community to understand the needs of the target population, who they trust, the messages that resonate and what works for them;
- design an engagement strategy tailored to the specific needs of the target population and the demographics of the area;
- use or set up an appropriate and effective field team that is well managed; this should include a customer field officer team with local intelligence and language skills;
- work in collaboration with highly respected, trusted local intermediaries;
- tailor materials to the audience;
- invest time up front in developing relationships and in setting up contractual arrangements; be mindful that different organisations will have different commercial and customer expectations and allow time for plenty of dialogue regarding this at the outset.
- the partnership is key; bring together organisations with the required combination of expertise and invest time in designing the partnership;
- ensure open and effective communication between partners as well as a collaborative approach across all partners working together to overcome obstacles in a constructive way and make adjustments as and when necessary.

energywise has successfully brought together a number of very different organisations with the necessary range of expertise to successfully implement a complex programme of this nature. This has included development a successful and mutually beneficial collaboration between the DNO, the energy supplier and a local community. The Bromley by Bow Centre's role on the project of trusted intermediary, connecting UK Power Networks with the local community and residents, has been instrumental to the success of the project. In turn, the Centre and the field officer team have learned new skills from their involvement in this complex, multi-agency partnership, helping to build their capability and confidence in terms of participating in similar projects in the future.

References

Citizens Advice (2016), Early consumer experiences of smart meters. June 2016. Available at: https://www.citizensadvice.org.uk/about-us/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/early-consumer-experiences-of-smart-meters/

Citizens Advice (2017), Smart support: support for vulnerable consumers in the smart meter roll-out. Available at: https://www.citizensadvice.org.uk/about-us/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/smart-support-a-good-practice-guide/

Dillman, D. A. (2000). Mail and Internet Surveys: The Tailored Design Method. New York, Chichester, Weinheim, Brisbane, Singapore, Toronto, John Wiley & Sons, Inc.

Energy Saving Trust (2011) Renew Rollout Evaluation Report 2011-12, published by GLA
Institute for Sustainability (2013) Home Energy Systems Trials - A summary of learning to inform future projects (part 2 - TSB funded project)

McMichael, M. (2011) Social capital and the diffusion of energy-reducing innovations in UK households. University College London Energy Institute, Bartlett School of Graduate Studies. London, University College London. PhD: 280.

McMichael, M. and D. Shipworth (2013). "The value of social networks in the diffusion of energy-efficiency innovations in UK households." Energy Policy **53**: 159-168.

NEA (2013), Smart for all: consumer experiences of smart meters. Report from phase 2 of research. A report for the Department of Energy and Climate Change. Available at: http://www.nea.org.uk/wp-content/uploads/2015/07/march-NEA-Smart-for-All-2-FullReport-FINAL.pdf

UK Power Networks (2015); SDRC 9.2 Customer Recruitment
http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

UK Power Networks (2017); SDRC 9.3, Results from the first six months of the energy saving trial
http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

UK Power Networks (2017); Final energy saving report,
http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

Raw G & Ross D (2011) Energy Research Project, Final Analysis, AECOM; SSE findings

Appendix A – Literature review summary update, May 2017

This updated paper[31] summarises the findings from a literature review undertaken by CAG Consultants for UK Power Networks. The literature review aimed to research and identify best practice in terms of recruiting and engaging vulnerable, fuel poor customers based on the findings of other work in the field and to use the results of the review to inform the development of an engagement strategy.

The original literature review took place in 2013. In May 2017 we undertook a brief review of key papers published since the original review. This paper presents the findings from the original review, together with a summary of any new findings from the additional review (references dated 2013 and later).

The scope of the review

In undertaking the rapid literature review CAG Consultants ensured that the work:

- built on existing learning outcomes from existing customer engagement projects with the target audience.
- explored value for money for customers.
- provides academic rigour to proposal for an engagement plan.
- demonstrates project management in line with best practice.

To ensure that the review was rigorous and was effective in seeking out and analysing relevant data, a set of review protocols was established, using the principles of a Campbell Systematic Review[32]. These included inclusion criteria, lines of enquiry and researchers' protocols.

Inclusion criteria

We have used recognised review methods to ensure that the rapid literature review is carried out in ways that are transparent, can be replicated and where bias is reduced. In developing project protocols we established the following inclusion and exclusion criteria:

- **nature of what is being studied** – engagement with customers on energy efficiency measures or particularly relevant; earning to engaging the target audience;
- **population** – vulnerable groups as defined in the brief.
- **language** – work in English.
- **date of research** – produced in the last five years (pre-2013 – with an update then provided in 2017 covering key literature published since 2013).

Lines of enquiry

We established a set of lines of enquiry, during review all literature was scrutinized for evidence in each enquiry area and relevant data was collated in a review database. Lines of enquiry included:

- types of recruitment and engagement used, with a focus on what worked well and what worked less well including lessons:
  - recruitment.
  - engagement.
  - maintenance.
  - number of participants.
  - dropout rate.
- delivery costs:
  - Costs
  - Cost benefits of holistic/partnership approach to UK Power Networks and partners.
- methods used to measure outcomes and impact, and how 'what worked well' was assessed.
- Codes of Practice used.

[31] The original literature review was summarised in the Bid Submission 2013 document and in the SDRC 9.2 report: http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Energywise/

[32] A Campbell Systematic Review is meant to review and synthesize evidence on social and behavioural interventions and public policy, including education, criminal justice, and social welfare, among other areas. The primary concern is with evidence on overall intervention or policy effectiveness and how effectiveness is influenced by variations in process and implementation, intervention components and recipients, as well as other factors. See http://www.campbellcollaboration.org/artman2/uploads/1/C2_Protocols_guidelines_v1.pdf

Summary findings

The research team analysed the collated data from the literature review and drew out key lessons to inform the development of the engagement strategy. These key lessons are summarised below.

The research suggests that there are some key considerations that need to be built into **planning the recruitment** of vulnerable customers, including:

- **identifying vulnerable households** – especially when they might not define themselves as such and given that being vulnerable is not a fixed state.
- **overcoming mistrust** – through working with local intermediaries and ensuring that those who have direct contact have the skills and knowledge required to build trust.
- **resources required** – ensuring that the front loading of resources to recruitment is enshrined in the programme.
- **finding the right methods to recruit** – including considering combining a variety of methods to ensure reach.
- **getting the message right** – hooking into the motivations of vulnerable households and the fuel poor.
- **addressing barriers to recruitment** – through having a full understanding of the challenges faced by the target audience.
- **seeking out existing opportunities** – both to be in contact with target households and to influence behaviour.

Identifying vulnerable households

In terms of defining and identifying vulnerable households, in 2013 Ofgem (2013a) published its vulnerable consumer's strategy, which identifies a number of risk facts that can put consumers into vulnerable positions, detailed below.

There are a range of circumstances that consumers can be in that can put them in vulnerable positions. These risk factors include, but are not limited to, the following.

Personal circumstances

- Living alone
- Not having internet access
- Being on a low income
- Being unemployed or being made redundant
- Being a full-time carer
- Being a lone parent
- Leaving care for the first time
- Experiencing relationship breakdown
- Experiencing bereavement

The property

- Living in a rural area and off the gas grid
- Living in private rented accommodation
- Living in a cold, inefficient home

(Taken from Ofgem's 2013 Vulnerable Consumers Strategy)

In a review of energy supplier good practice in relation to smart meter deployment, Citizens Advice (2017) noted that some suppliers have built on the content of Ofgem's Vulnerable Consumer Strategy (see above) to broaden their definition of vulnerability specifically for the roll-out. For example, one supplier has included characteristics such as housing tenure, internet access and the energy efficiency of the property in their definition.

Smart Energy GB (2015) have developed a list of 23 characteristics that are likely to result in obstacles along the smart meter journey. Whilst this is not a definition of vulnerability *per se*, it highlights a range of vulnerabilities that are likely to result in challenges for smart meter roll-out.

The National Audit Office (2017) highlight that many conditions that may cause vulnerability are projected to increase. The number of people with dementia, for example, is projected to rise from 0.9 million to 2 million by 2050. An estimated 8 million people are over-indebted, with expected rises in household debt potentially putting further pressure on finances.

Methods of recruitment

The research has suggested that there are no 'right' ways to recruit, but has identified some useful recruitment methods to draw on. In summary these include;

- **Finding the most appropriate way to reach the target audience** – Different communication methods will be appropriate for different audiences.
- **Working with local organisations with day to day contact with vulnerable groups** – Hargreaves (2010) reports that local authorities and housing associations can be used to recruit low-income and elderly households.
- **Testing the impact of the messaging** – Ensuring that information is provided in a form that customers can understand is important.
- **Taking it out to the people** – EST (2011) reported that the London-wide RE:NEW project found that direct door to door engagement, supported by wider engagement to raise the level of awareness about the scheme, was the most effective approach to recruitment.
- **Working with the most appropriate intermediary** – This could include the local authority, social housing provider, fire service, the energy supplier and/or local third sector organisations.

The additional literature reviewed highlighted further steps that suppliers and other organisations can take to enhance good practice in relation smart meter engagement with vulnerable consumers. For example, Citizens Advice (2017) highlighted the following good practice, already being undertaken by some suppliers:

- training staff to recognise vulnerability
- using established scripts or conversation guides when conversing with customers
- creating platforms for customers to self-identify any vulnerabilities
- engaging with customers early and applying their understanding of specific needs to their smart meter offer
- building relationships with organisations such as local authorities, housing associations, charities, Smart Energy GB and Registered Social Landlords - these relationships allow suppliers to identify specific types of vulnerability and engage appropriately
- using local community centres as a point of contact for customers – this offers the consumer familiar surroundings in which to discuss any smart meter related issues

Citizens Advice (2017) also highlighted the importance of ensuring that vulnerable consumers are never put under pressure to accept a smart meter. They argued that clarity on the consumer's rights are particularly important for those suffering certain vulnerabilities, such as those related to mental health, in preventing distress.

Other recommendations on engaging vulnerable consumers on smart meters included (NEA, 2013):

- in areas where suppliers identify a high proportion of minority populations, especially where English is not a first language, they should work together, and co-ordinate community engagement and demonstration activities to reach out to these communities
- suppliers should have in place a distinct pathway for vulnerable customers, tailored to their needs in terms of accessibility and clarity. Where appropriate, this should include allowing extra time for installations and IHD demonstrations, clear energy use advice, additional low cost energy saving devices and referrals to other sources of assistance.

- all demonstrations and advice literature should offer a small number of key energy efficiency tips, expressed in clear and plain language. These should include information on the comparative cost of devices (for example, cooking on the hob vs. microwave) and go beyond the standard advice to 'switch off lights' or 'switch off devices at the plug', which most consumers are already aware of.

Messages/motivations

A large number of studies indicated that how the message is conveyed is an important consideration in recruitment. For example finding what motivates people can be useful in opening doors provided the message is tailored accordingly. Hargreaves (2010) found that participants in a smart meter trial had four motivations – financial, environmental, information gathering and technological. Low income users had financial considerations uppermost in their mind.

Findings from the May 2017 review also emphasised the importance of messaging and communications for smart meter recruitment and engagement. Buchanan et al. (2016), for example, propose that "in order to secure consumer acceptance it is vital to communicate with the general public as clearly and as transparently as possible."

Buchanan et al (2016) found that promoting the benefits of smart meters could help to promote consumer acceptance. These benefits included: avoiding the hassle of meter readings, more accurate billings, the chance to reduce their energy bills and the enablement of future smart meter services, including text alerts. NEA (2013) also found that "the benefits of not having a meter reader call and the promise of accurate billing appear to enhance the acceptance of smart meters".

They argue that communications should clarify consumer expectations for smart meters both in the short-term and the long-term. So as well as emphasising short-term benefits (e.g. the chance to 'take control' of energy bills), there needs to be messaging about the 'bigger picture' (e.g. contextualising smart meters within the need for a 'smart grid').

Citizens Advice (2016) warned it was important for suppliers to be clear about the potential interoperability issues with SMETS-1 smart meters, finding that just 3% of consumers in their research had said that their smart meter suppliers had highlighted any limitations of the smart meter before installation.

The organisation involved in delivering communications was also highlighted as important. NEA (2013) found that "receiving communications from agencies with whom households have an existing relationship, such as energy suppliers, was also seen as enhancing legitimacy, this was especially important when contact was by telephone. Alternative sources of advice specified included local charities and local authorities who were perceived as more independent and able to provide unbiased support."

NEA (2013) provided guidance about the minimum information consumers should receive in advance of a smart meter installation. For example, they advised that all consumers should receive as a minimum an explanation in advance of what a smart meter is, why they are receiving one, its potential benefits, and a contact number to ring to find out more. They also said that energy suppliers should carry out a thorough check of the customer's support needs, and provide an explanation of what will happen on the day of installation, including that they will receive an IHD, and a demonstration of how to use it.

Barriers

In order to develop an effective engagement strategy it is essential that full consideration is made of the potential barriers to recruitment. The research has identified key barriers including;

- **survey issues** – Raw and Ross (2011) found that reasons for not participating included the recruitment survey being lengthy, other survey issues and fears were also cited.
- **lack of broadband access** – Institute for Sustainability (2013) found that a major barrier to recruitment was the requirement to have broadband access, which many social tenants did not have.

- **perceived drawbacks of the technology** – Lewis et al (2013) found that perceived drawbacks of smart meters included: fear of a financial charge for installation; concern that the device might be inaccurate or use energy itself; fear of change; and concern that having a smart meter might affect the consumer's energy tariff.
- **language** – Agnolucci et al (2012) found that a key barrier to recruiting households in an inner London Borough was language (particularly for those ethnicities without a considerable presence in the borough). EST (2011) found that employing assessors who are able to speak several languages and producing literature in a range of languages is important.
- **short term tenancies** – Agnolucci et al (2012) further found that private rented sector were difficult to recruit due to tenants having short contracts and therefore being unlikely to reap the benefits of energy efficiency improvements, and/or fear of retaliatory eviction from their landlord if they ask for improvements.
- **addressing practicalities** – for example DECC (2012) lists barriers that prevent or limit changes in behaviour to include comfort, aesthetics and the physical layout of the home.

Buchanan et al. (2016) identified a range of perceived threats that might prevent take-up of smart meters. These included: privacy violations, issues of security, loss of control and autonomy, mistrust of energy suppliers, and disruption to daily household routines.

Approaches to maintaining engagement

Once householders are successfully recruited, engagement with them needs to be maintained over the life time of the intervention. Here we have collected the research data to outline the methods used and challenges faced. An overarching finding is that it appears to be essential to take the service to the client; they often can't, or don't choose to use other services due to language, health, confidence or financial barriers, (Bates, 2013).

Other key factors include;

- communicating the right messages that 'hit home' with the audience;
- providing face to face key worker support;
- building in cycles of feedback that underpin learning;
- ensuring delivery staff are trained, knowledgeable and skilled;
- providing incentives; and
- addressing challenges (Bates, 2013).

Literature reviewed for the May 2017 update highlighted the importance of providing post-installation support to vulnerable consumers. Citizens Advice (2016) pointed to research conducted by DECC which had found that consumers who found the IHD harder to use were more likely to be older, from lower social grades, have low household incomes, have no formal qualifications, or live with someone who has a long-term health condition or disability. Citizens Advice (2016) and the NEA (2013) also found that there was the potential for too much information provision during the installation, especially for consumers with mental health issues or learning difficulties. Both organisations concluded that post-installation follow-up with vulnerable consumers was particularly important.

NEA recommended a 'staged approach' to follow-up for vulnerable consumers. This should include a short courtesy follow-up call occurring up to one week after installation with a more detailed follow-up at around three months after installation. In addition, at six months from installation, suppliers should seek to follow-up again and gently remind households of how to get the best from the smart meter to help ensure households are re-invigorated in their use of their IHD. A free phone number, including from a mobile, should also be printed on smart meters and IHDs encouraging consumers to call for any further information, not just 'problems'.

Other recommendations from the literature included:

- looking for ongoing signs of vulnerability (Citizens Advice 2016);
- preparing customers for the prospect of increasing bills after a smart meter installation (Citizens Advice 2016); and

- holding community events which facilitate face-to-face interaction and explanation of smart meters could have wider benefits to the roll-out and be essential for sustaining engagement (NEA 2013).

Challenges

The research evidence suggest some key challenges that need to be addressed to ensure that participant involvement is maintained. These include:

- Frustrations – Hargreaves (2010) reported that some low income participants in a smart meter trial were frustrated that the savings were very small. Frustrations were also expressed that rising energy prices had prevented the behavioural changes they were making translating into savings.
- Privacy and security – address concerns around privacy and security through open and honest communication around the measures undertaken to protect consumer data (O2, 2013).
- Anticipating drop outs – some level of drop out is inevitable. The Institute for Sustainability (2013) reported that in one trial, three of the 12 recruited householders dropped out before installation (due to specific health issues) and another two during survey. Warm Zone pilots (NEA et al, 2005) reported a drop out rate of 3% (after households had accepted having measures installed).

Cost information

The research has been informative in bringing clarity to the overarching issue that effective engagement requires significant investment in resource and time. Darby (2010) found that community programmes can be highly effective, sometimes involving a relatively high cost in time and resources. Key areas for which costs need to be built in have also emerged from the review. These include:

- delivering appropriate communication;
- employing and training staff, skilled in energy saving and softer skills such as developing rapport;
- providing ongoing and face to face support to households;
- developing tailored and appropriate resources;
- providing incentives; and
- resourcing formative evaluation of impact and reach.

The literature reviewed in the May 2017 review did not reveal any additional insights on cost information.

Codes of practice

Ofgem (2012) suggests that suppliers and distributors adopt BSI Standard BS 18477 'Inclusive service provision – requirements for identifying and responding to consumer vulnerability'. It states that the Standard is a useful indication of the types of behaviour that we expect from suppliers and distributors and it adopts a perspective of vulnerability that it based on understanding risk factors. The Standard gives guidance on how organisations can interact with all consumers so that no-one is inappropriately excluded and helps organisation to identify and assist those consumers who could be vulnerable or at risk of disadvantage.

Beyond this industry standard and the customer engagement standard AccountAbility 1001, the literature review looked at sources from organisations that work closely with vulnerable consumers and the fuel poor. But we found only limited reference to specific codes of practice. Most notably the NHS good engagement practice guide (2011) defines some Principles of Good Practice. These include:

- addressing barriers in both planning and delivery;
- promoting activities well and in appropriate ways;
- using multiple methods to recruit and engage while being proportionate;
- going to the people rather than expecting them to come to you;
- combine efforts and resources with partners to maximise effort; and
- offering opportunities to participants to input into design and evaluation at all stages.

The literature reviewed in the May 2017 review did not reveal any additional insights on codes of practice.

List of documents reviewed

- Action for Children (2010) Supporting the UK's most vulnerable families

- Agnolucci P, Ekins P, Simpson K & Wade F (2012) Fuel Poverty: Evidence from an inner London borough, A report for the Chesshire Lehmann Fund, UCL Energy Institute
- Anderson W & White V (2010), You just have to get by; coping with low incomes and cold homes, Centre for Sustainable Energy
- Barnado's (2011) Reaching families in need - Learning from practice in Barnardo's Children's Centres
- Bates I, Allen D & Rogers M (2013) Reaching the fuel poor - a how to guide, Umbrella Fair
- Bousarovski Dr S et al (2013) Fuel Poverty amongst Young Adults in Multiple Occupancy Housing - preliminary findings and recommendations
- Centre for Sustainable Energy and Community Development Xchange (2007) Mobilising individual behaviour change through community initiatives: lessons for climate change. Prepared for Defra, CLG, DTI, DoT and the Treasury
- Civil Contingencies Secretariat (2008) Identifying people who are vulnerable in a crisis: guidance for emergency planners and responders, published by the Cabinet Office.
- Community Enterprise East London (2013) How can the residents of Barking and Dagenham be made aware of the support that is available to them? – A study of a school based approach towards accessing hard to reach families experiencing fuel poverty
- Consumer Focus (2012) Consumer Focus response to Ofgem's Vulnerable Consumers Strategy
- Consumer Focus/Accenture: Smart Prepayment in Great Britain: making prepay energy work in a smart world
- Consumer Futures and Accenture (2013) Smart Prepayment in Great Britain Making prepay energy work in a smart world report on smart and prepayment meters
- Darby S (2010) Literature review for the Energy Demand Research Project Environmental Change Institute, University of Oxford, published for Ofgem
- Darby S (2010) Smart metering: what potential for householder engagement? Building Research and Information 38 (5), 442-457
- DECC, 2012, What Works in Changing Energy-Using Behaviours in the Home? RAND Europe
- Energy Saving Trust (2011) Renew Rollout Evaluation Report 2011-12, published by GLA
- Energy UK (2012) Reaching and engaging consumers who are vulnerable or at risk of poverty: Energy UK workshop report, July 2012,
- FDS International (2011) Vulnerable customer research, Report for Ofgem
- Frontier Economics and Sustainability First (2012) Demand Side Response in the domestic sector- a literature review of major trials, published by DECC
- George M, Graham C & Lennard L (2011) Too many hurdles: information and advice barriers in the energy market, by the University of Leicester for the Eaga Charitable Trust, November 2011
- Hargreaves T, Nye M & Burgess J (2010) Making energy visible: A qualitative field study of how householders interact with feedback from smart energy monitors, Energy Policy
- Hargreaves, T, 2010, The Visible Energy Trial: Insights from Qualitative Interviews, Tyndall Centre
- Institute for Sustainability (2013) Home Energy Systems Trials - A summary of learning to inform future projects (part 2 - TSB funded project)
- Institute for Sustainability and UCL (2013) Post-occupancy interview analysis report Key Findings: Analysis of a selection of Retrofit for the Future projects, published by Institute for Sustainability
- Lewis J & Rosborough J, Nottingham Trent University (2013) Final Report: Exploring the role of marketing as a tool to aid smart meter adoption amongst fuel poverty and vulnerable group, Chesshire Lehman Research Unit for Financial Inclusion
- Liverpool John Moore University (2013) Fuel Poverty Research Case studies, Research Unit for Financial Inclusion
- National Energy Action and RS Consulting (2012) Smart for all: understanding customer vulnerability during the experience of smart meter installation, a report funded by DECC and Consumer Focus
- NEA, EST & CSE (2005) Warm Zones External Evaluation, for Defra and DTI
- NHS (2011) Engaging protected and vulnerable groups: Good engagement practice guide for the NHS Equality Delivery System
- Nye M & Burgess J (2008) Promoting durable change in household waste and energy use behaviour, DEFRA
- O2 (2013) Effectively engaging consumers to ensure smart meter success
- Ofgem (2010) Energy Demand Research Project; Review of progress for the period March 2009 – September 2009
- Ofgem (2012) Proposals for a new Consumer Vulnerability Strategy, 28 September 2012
- Ofgem (2013) Strategy decision for the RIIO-ED1 electricity distribution price control

- Ofgem (2013a) Consumer vulnerability strategy
- Raw G & Ross D (2011) Energy Research Project, Final Analysis, AECOM; SSE findings
- Robinson E, Scott D, Meredith V, Nair L & Higgins D, (2012) Good and innovative practice in service delivery to vulnerable and disadvantaged families and children,
- Rushton N, Robinson Dr Z & Ormerod, Prof M (2012) - Evaluating in-the-home fuel poverty alleviation interventions in North Staffordshire, Keele University
- S Altman-Richer, (2010), Governmentality, 'Community' and Networks - Policy Summary, MSc Thesis, University of Oxford (supported by Chesshire Lehman Fund)
- Sharon Gollan Associates (2010) The Community Financial Inclusion Project: Final Report, report for Thrive and Eaga Charitable Trust
- Sheen G & Jones Dr P, Liverpool John Moore University (2013) Fuel Poverty and Elderly Social housing tenants, Chesshire Lehman Research Unit for Financial Inclusion
- Stearn, J (2012) Tackling consumer vulnerability - an action plan for empowerment. Consumer Focus
- Stockton H (2012) Green Deal and Energy Company Obligation: The design and delivery of energy efficiency and fuel poverty advice services to vulnerable citizens, Prepared by National Energy Action for the Department of Energy and Climate Change
- Sustainability First & Engage Consulting (2008) International Smart Meter Trials - Smart Tariffs and Consumer Stimuli - Selected Case Studies
- Sutton L & Hill K (2012) Mediating the Risk of fuel poverty in pensioner households, Centre for Research in Social Policy, Loughborough University
- Wade J et al (2013) Local Authority Competitions 2012 Process Evaluation Final report, published by DECC

Additional documents reviewed (for May 2017 update)

- Buchanan, K., Banks, N., Preston, I. and Russo, R. (2016), The British public's perception of the UK smart metering initiative: Threats and opportunities, Energy Policy 91 (2016) 87–97. Available at: http://www.sciencedirect.com/science/article/pii/S0301421516300039 [Accessed 7 May 2017]
- Citizens Advice (2016), Early consumer experiences of smart meters. June 2016. Available at: https://www.citizensadvice.org.uk/about-us/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/early-consumer-experiences-of-smart-meters/ [Accessed 7 May 2017]
- Citizens Advice (2017), Smart support: support for vulnerable consumers in the smart meter roll-out. Available at: https://www.citizensadvice.org.uk/about-us/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/smart-support-a-good-practice-guide/ [Accessed 7 May 2017]
- National Audit Office (2017), Vulnerable consumers in regulated industries, HC 1061 Session 2016-17, 31 March 2017. Available at: https://www.nao.org.uk/report/vulnerable-consumers-in-regulated-industries/ [Accessed 4 May 2017]
- NEA (2013), Smart for all: consumer experiences of smart meters. Report from phase 2 of research. A report for the Department of Energy and Climate Change. Available at: http://www.nea.org.uk/wp-content/uploads/2015/07/march-NEA-Smart-for-All-2-FullReport-FINAL.pdf [Accessed 7 May 2017]
- Ofgem (2015), Consumer Vulnerability Strategy Progress Report: September 2015. Available at: https://www.ofgem.gov.uk/publications-and-updates/consumer-vulnerability-strategy-progress-report [Accessed 4 May 2017]
- Smart Energy GB (2015), Smart energy for all: identifying audience characteristics that may act as additional barriers to realising the benefits of a smart meter, July 2015. Available at: https://www.smartenergygb.org/en/resources/press-centre/press-releases-folder/smart-energy-for-all-updated [Accessed 7 May 2017]

Appendix B – Recommended actions from the evaluation of the recruitment pilot

Item	Recommended actions	Justification	Actioned?
Invitation letter	Make more room for the signature.	Insufficient room for signature at present.	Yes
Invitation letter and reminder letter envelope	Take **energy**wise off the envelope or add in the partners' logos.	Idea of having a hand addressed envelope is to make recipients think it's from a friend, and thus open it. Adding '**energy**wise' to the envelope is somewhat counterproductive to this. If branding is required on the envelope, it should include the landlord's logo, as one customer suggested that was the only branded correspondence they would be sure to open.	Yes; housing providers' logos were added to the envelope in conjunction with the **energy**wise logo.
Reminder letter	Don't mention the drop-in event in the reminder letter.	Too soon in the recruitment process to promote the drop-in events.	Yes
New item: drop in event leaflet	Develop a separate leaflet to promote the drop-in events, and use this after the first or second round of door knocking, alongside the 'sorry we missed you' cards. Make it clear that people only need to come along for 15 minutes or so. Also remind people of the events by text/email.	No-one attended the pilot drop-in event. The team felt it was held and promoted too soon after the invitation letter and also that it was potentially confusing for customers to have the details of the drop-in events in the reminder letter. They feel the drop-in event would be more useful held at a later point during the recruitment process.	Yes – the drop in event was advertised by handing leaflets to 80 designated households (located close to a chosen venue) as part of the door knocking activity. Those that said they might attend were reminded about the event by text message.
Website	Include a preferred call back time.	Will increase the team's efficiency in terms of being likely to get hold of people when they call.	Yes
FAQs	Team should develop suggested answers to the additional FAQs listed above and provide to UK Power Networks for sign off.	Team are currently getting questions they are not sure how to answer. Need to ensure that consistent and accurate answers are provided.	Yes

Item	Recommended actions	Justification	Actioned?
Processes	Workshop to be organised between customer field officer team and UK Power Networks (as part of overall evaluation workshop).	There is scope to improve efficiency of processes and communication.	Yes
Operational	UK Power Networks to discuss systems and procedures to ensure these are as efficient and smooth as possible. Customer field officer team to develop suggested plan for recruitment during Ramadan.	Ramadan started in mid-June 2015, lasting for a month. The ability of the team (who all observe Ramadan) to undertake evening door knocking/home visits will be impeded during this period, and it will be hard to signup Muslim customers who will be busy with prayers and may sleep for much of the day.	It was not possible to delay the start of recruiting until after Ramadan was over, but the team worked around Ramadan and the recruitment period was extended.
Tracker	Customer field officer team to work with UK Power Networks to ensure the tracker database automatically summarises information (e.g. sign-ups at different stages) that will be required in future reports.	Currently, this information has to be produced manually which is time consuming and will become more so once the main trial starts.	The team at Bromley by Bow Centre was advised to develop a more functional tracker. This was not completed for trial 1 recruitment due to other priorities related to the recruitment phase and the lack of a CFO Manager at that point. UK Power Networks provided support in developing a preliminary tracker and a decision making tool. This task was completed for trial 2, with an Access database created by Bromley by Bow Centre with UCL support and advice from British Gas

Appendix C – Useful tips for replication

The findings from this evaluation exercise present some useful lessons for organisations seeking to replicate elements of this project – whether related to the smart meter rollout, recruiting low income households to a social research project, or engaging with social housing tenants on energy saving schemes. These are grouped against relevant topics and reported here for ease of dissemination with other organisations. (More detailed lessons are presented in the main report.)

Identifying households to invite to take part

- Where public data on income and fuel bills is not available, proxies can be used to identify fuel poor customer such as social housing tenants living in lower efficiency homes in areas of high deprivation.
- Minimise exclusion criteria to maintain the biggest possible pool of potential participants. (Restricting participant to tenants of two social housing providers limited the number of households who could be approached.)
- Issue clear expectations to partners at the project outset about the data required and the format of this – reduce the number of iterations required.
- If using EPC data, consider purchasing this rather than requiring partners to supply it, as they may not have it in an easily accessible format.
- Allow for high numbers of dropouts after sign-up. For long duration projects, take into account that people may change supplier or move house.

Ensuring effective recruitment

Staffing

- Locally based field officers with knowledge of local culture and languages can be very effective in recruiting hard to reach groups. Involving housing providers in engaging their tenants can also be effective.
- Having recruiters working in pairs, involving a diverse team, is effective. (Some customers are more comfortable talking to a woman). Having a field officer working alongside a British Gas engineer worked well in terms of persuading people to sign-up during the MDU recruitment phase. Where possible, have pairs working together throughout the recruitment period in the same neighbourhood so they can develop a rapport with their targeted households.
- In addition to project badges, use of uniforms can increase recognition and trust.
- Bringing in specialise recruitment organisations can be effective in getting people to sign-up. However, the local team may have a deeper understanding of the community and may result in more effective long-term customer engagement. Where specialist recruiters are employed, it is important to ensure coordination between the local customer field officers and the recruiters as well as consistency of key messages.
- Keep the team of recruiters small with regular refresher training, meetings to share learning and quality assurance of the door knocking.
- Staff should be well briefed on the project and trained in engagement techniques.
- Door knocking is effective but time consuming, particularly when a project is not area-based. Evenings and weekends work particularly well.
- The recruitment partner should have excellent data management and analytical skills to enable high levels of data accuracy and the ability to amend the recruitment schedule as necessary based on the success of different approaches.
- An appropriately skilled CFO Manager should be in post for the full duration of the recruitment and installation phases to ensure effective management of these critical phases, including efficient coordination between team members and consistency in the communication of key messages.
- Regular catch-up meetings between recruiter partners will help to ensure all parties are up to speed on the status of participants; this is particularly important in the absence of a database that enables real-time data sharing.

Message and materials

- Low income customers are likely to be primarily motivated by the prospect of saving money on their bills. The offer of free energy saving devices and shopping vouchers can also encourage people to take part. In the case of smart meters, better visibility of energy costs and easier top up methods for prepayment customers are the key features that make them attractive.
- Professional, well designed materials are essential. Customers in this group like highly visual materials with limited text.
- Clear indication about an energy supplier's involvement will limit any misconception that a project is about energy switching. The choice of an appropriate name for the project may also help.
- Test the message and materials through focus group(s) before finalising.

Ensuring effective installation

- Involving a community partner can increase appointment booking success rate.
- Pilot the installation phase before rollout.
- Having the energy supplier manage the installation process will ensure that customers have a single point of contact.
- Minimise customer disruption by liaising with third parties to ensure meter access (where necessary) and coordinating installation and equipment delivery into one appointment if possible. (The latter was challenging for **energy**wise as a different organisation was responsible for installing the temperature monitoring equipment.) Where smart meters are being installed in social housing, the installation process can be facilitated by:
  - the energy suppliers requesting a list of addresses from the housing provider for which a staff member (e.g. caretaker) will need to enable access;
  - the energy supplier then contacting the caretaker in advance to request they are present to enable this access at the appointed time.
- Urge households present at the point of install to brief others living in the household about the smart meter and Smart Energy Monitor, otherwise the benefits from the smart meter technology will be limited.
- For complex projects involving different installation partners, provide clear information to participants about what will be installed, by whom and how long it will take.
- Train up the customer field officer team to install and demonstrate equipment where possible (e.g. the eco-kettle and the standby shutdown).
- Planning should take into consideration any locally relevant festivals or traditions, such as Ramadan.
- Customer field officers can aid access to properties and can provide translation where necessary.

Minimising dropouts and ensuring effective ongoing engagement

- Provide very clear messages about what is involved in the project, possibly including a video, and ensure consistency of messages across different recruiters to effectively manager participants' expectations.
- Avoid equipment that is outside the scope of the project, which may cause further disruption to the participants. In the case of **energy**wise, issues with the temperature monitoring equipment caused unwelcome disruption for some participants.
- Streamline the installation process to reduce the number of interactions with customers.
- Minimise the number of unexpected interactions with customers in general.
- Keep participants as a whole informed of what is happening in the project.
- Provide participants with an opportunity to get together to share their experiences and learn from each other. Listen to participants about their experiences and take action based on their feedback.
- Keep in regular communication with participants to remind them of how useful their involvement is and to thank them for their time – with voucher where appropriate (e.g. where customers have faced disruption).

Achieving smart meter benefits and energy savings

- Energy savings will be increased if, as well as energy saving kit being provided, it is installed/demonstrated by the customer field officers. This could include installing LED lightbulbs (if not hazardous to do so), setting up the standby shutdown, setting up an eco-kettle and, if possible, demonstrating the energy savings these devices achieve using the smart energy display. In addition, it

would be useful if a trusted intermediary could talk through the energy saving leaflet with a customer (perhaps whilst having a cup of tea made from water boiled in the eco-kettle), identifying key opportunities for that householder to save money.

- Providing an energy saving advice leaflet is unlikely to have much impact without someone to talk through this with the householder.

Achieving benefits from time of use tariffs – preliminary insights from trial 2

- Early findings are that it is easier to communicate a static ToU tariff than a CPR tariff.
- Participants find it easier to shift their washing to other times than other household chores or activities that use electricity. However some participants are trying to shift their ironing, their cooking and are charging their electrical devices at other times of the day or week.
- Family routines related to cooking and caring for children seem to be the least flexible. Although some families have managed to engage their (younger) children in energy shifting, and find it a fun activity.
- One or two participants are highly motivated and have taken significant steps to get benefits from the ToU offers.