Vulnerable Customers and Energy Efficiency Low Carbon Network Fund

SDRC 9.2 – Customer Recruitment

UK Power Networks
Delivering your electricity

Contents

Definitions

Term	Description
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 does not receive the interventions in Trial 1, and is used for comparison to the intervention group to see if the interventions had any effect.
DNO	Distribution Network Operator, responsible for managing one or more of the fourteen electricity distribution networks in Great Britain, delivering electricity to customers.
Energy Social Capital	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.
Customer Field Officer (CFO)	The intermediary hired by the project to be the contact for participants, and the 'face' of the project. The Field Officers duties will include recruiting and engaging participants along with gathering data.
Datalogger	A non-fiscal meter that measures electricity consumption. It also referred to as secondary electricity meter.
HAN	Home Area Network.
Intervention Group	This is the group exposed to the treatments (interventions) in Trial 1.
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
MDU	Multiple 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 certain categories of 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.
SMETS	Smart Meter Equipment Technical Specifications.
Self-disconnection	Means a scenario where a customer is unable to use power because they have run out of credit on their traditional meter.
Sampling Frame	Sampling frame is "the listing of all units in the population from which a sample is selected.
Self-disconnection diary	It is a diary given to all prepayment customers that are participants of the project. Customers, are asked to complete one entry each time they disconnect, including the date and time and reason for disconnecting, and how much they topped up following the disconnection. The developed diary can accommodate six entries of self-disconnection.
Smart Energy Display (SED)	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.

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

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 will investigate 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.

The overarching aim of the project is to enhance insights into the need of customers classified as 'fuel poor', a group with significant overlap with those who are vulnerable, and to explore the means to engage with them to facilitate increased participation in energy efficiency and an 'off-peak' tariff. 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 is the second Successful Delivery Reward Criteria (SDRC 9.2) and is focused on the customer recruitment including outcomes of the pilot study that has been undertaken by the project, review of best practise on fuel poor customer recruitment, findings from focus group, outcomes of the stakeholder mapping exercise and findings from the energy social capital survey that has been administered.

Section 1 of the report provides information about the project, while section 2 of the report provides information about the pilot study that has been undertaken. Within the pilot study, the CFO team has approached 36 eligible fuel poor customers in order for them to participate in the project and this section describes the timeline, criterions applied for identifying fuel poor customers and the interventions that are provided to these customers.

Section 3 of the project provides an overview of best practise in recruiting of fuel poor customers which is based on literature review, industry consultation and review of other LCNF projects. The findings from the identified best practise are also reviewed against the findings of the project achievements to date.

Section 4 of the report continues with the stakeholder mapping exercise and explains the importance of affiliating with local partners and identifying other stakeholders in the local area that could be advocates of the project. In summary, a total of 75 organisations have been identified as stakeholders within the local area and are worth approaching by the CFO team in order to advertise the project.

Section 5 of the report focuses on the energy social capital of the targeted customer group, as realised through the administration of the respective report within the pilot study. The response rate by the pilot participants to the energy social capital surveys is at 73% and valuable lessons learnt have been generated.

Section 6 of the report covers the focus group that the project undertook in June 2014 and how the feedback has been incorporated within the project's communication materials and strategy. It has been proven that is successful to implement a focus group with a representative sample of customers ahead of rolling out the recruitment strategy and materials to the wider customer pool.

Section 7 of the report is focused on the outcomes of the pilot study. The achieved response rate of 42% from the targeted customer pool is an indication that this customer pool is willing to engage with energy efficiency and demand side response initiatives. Further to the response rate achieved, the reasons for the non-participation of the customers are included as well as valuable lessons learnt obtained through feedback with the customers and the CFO team. Finally, the report summarises the key lessons learnt to section 8 and

continues to section 9 which includes the conclusions in relation to the customer recruitment.

SDRC 9.2 Evidence and Sections

Criterion (9.2) : Effective recruitment of fuel poor customers	
Evidence Item	**Relevant Section of the report**
• A review of best practice in fuel poor customer recruitment.	• Section 3 of the report outlined the outcomes of the review of best practice in fuel poor customer recruitment. Further to the review of best practice, the project undertook a comparison of the outcomes of the pilot study of the project with the outcomes of the review of the review of the best practise and are included Section 3. • Key lessons learnt are also summarised in section 8
• Identification of trusted intermediaries within the trial area community and their relationships with trial participants.	• Section 4 of the report outlines the importance of the use of local partners and the trusted intermediaries that have been identified in the trial area and their relationship with the participants. Further to the organisations that UK Power Networks have partnered with in respect to the project, Section 4 includes additional organisations present in the trial area (referred to as stakeholders), which will be approached in order for them to become advocates of the project. • Key lessons learnt are also summarised in section 8
• A quantitative mapping of participants' energy knowledge resources (energy social capital survey) within their social networks i.e. where they turn to, and who they trust, for knowledge about energy.	• Section 5 of the report outlines the energy social capital survey used by the project in relation to the pilot participants and includes the outcomes from the survey. In the pilot 15 social capital questionnaires were sent and 11 were returned, and such fact represents a response rate of 73% • Key lessons learnt are also summarised in section 8
• Findings from customer focus group testing of clarity and acceptability of recruitment communication materials.	• Section 6 of the report outlines the focus group that was undertaken as part of the project in June 2014. It includes a description of the focus group, along with key findings emerged out of it. • Key lessons learnt are also summarised in section 8
• Statistics on recruitment success rates and reasons for non-participation.	• Section 7 of the report includes the key findings and lessons learnt of the pilot study of the project. Part of the section is focused on the recruitment success rate and reasons for non-participation, as well as additional lessons learnt related to customer motivation, installation, and surveys. • Key lessons learnt are also summarised in section 8
• Qualitative evidence on the efficacy of different recruitment channels, strategies and materials.	• Similarly to the previous category, section 7 of the report includes the key findings in respect to the communication materials, channels and strategy. • Key lessons learnt are also summarised in section 8

1.0 Introduction

1.1 The Project

Figure 1: Project Brand

The Vulnerable Customers and Energy Efficiency (VCEE) project also known as **energy**wise is a partnership between ten organisations, led by UK Power Networks. Ofgem awarded the project £3.3 million of funding, under the Low Carbon Networks Fund (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 will do this by undertaking a research study with the aim to recruit 550 households who may be struggling with fuel bills in the London Borough of Tower Hamlets includes 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 will explore if households benefit from smart metering solutions (smart meter and smart energy display) and from energy efficiency technologies such as energy efficient light bulbs, an ecokettle and standby saver.

Secondly the project will work to understand households' appetite to change their behaviour by swapping to an 'off-peak' tariff, with favourable rates at off-peak times.

Figure 2: Project's Strapline

The project plans to understand:

- the extent to which this residential customer group is able and willing to engage in energy efficiency and an 'off peak' 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
- consequently how their move and reduction in demand away from network peak periods may benefit the electricity network by deferring or avoiding network reinforcement.

1.2 Project Partnership

energywise is a partnership between ten originations led by UK Power Networks:

Project Lead	Role in Project
UK Power Networks Delivering your electricity	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' networks operate in the most challenging, fastest growing, and highest cost part of the country. UK Power Networks takes electricity at high voltages from the National Grid and transforms it down to voltages suitable for commercial and domestic use.
Project Partner	**Role in the Project**
British Gas	The role of British Gas in the project is related to technical enablement and will provide the smart meters, 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.
Institute for Sustainability	An independent charity established in 2009 to support cross sector collaboration and innovation. Institute for Sustainability will capture and communicate lessons learnt over the course of the project and support the project in knowledge dissemination activities. The project envisages that the lessons learnt captured during the course of the project will support the replication of the project findings.
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 Making Poplar a better place to live	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.
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 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.

Table 1: Project Partners and Project Suppliers

1.3 Project overview

The project will involve engaging fuel poor customers to understand how they can benefit from energy efficiency measures[2] and whether they can reduce their electricity consumption at peak times through an 'off-peak' tariff (known as 'demand side response'), generating both customer and network benefits.

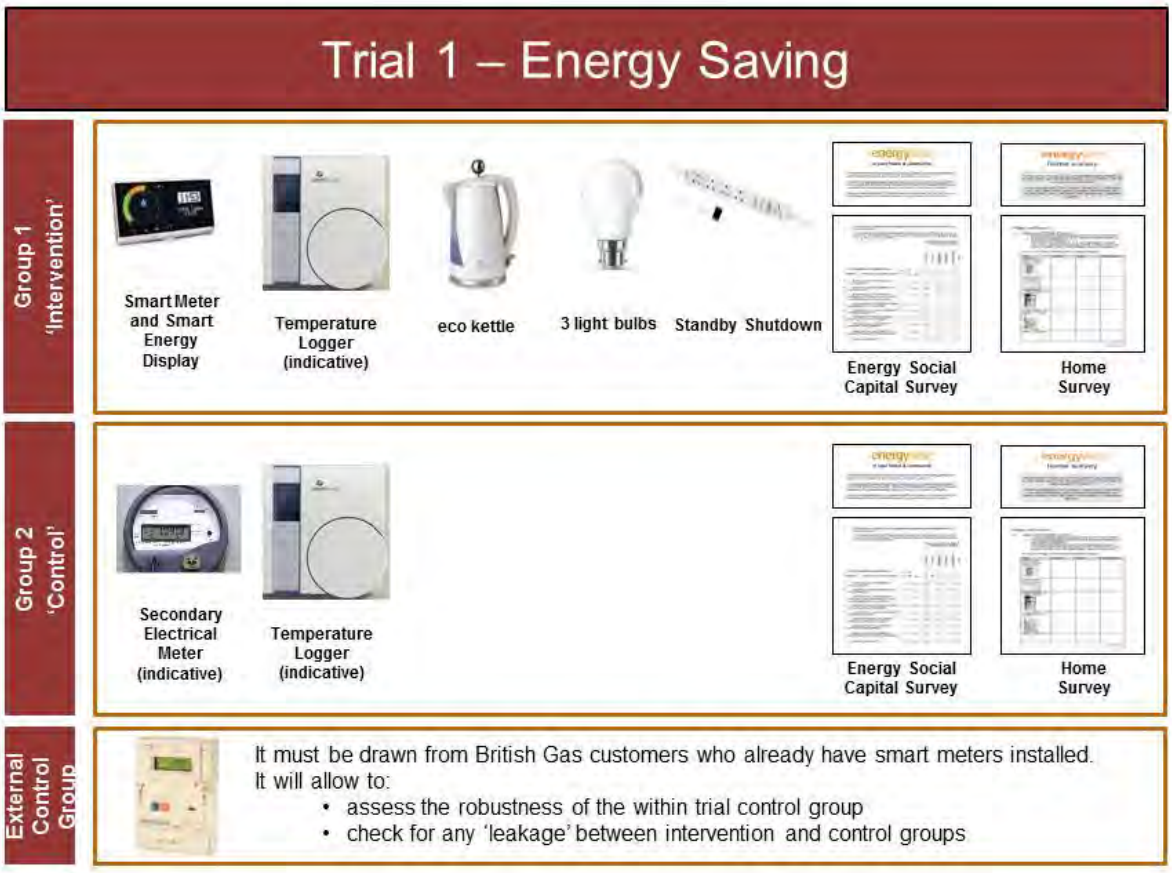
The project will involve two trials will involve up to 550 social housing tenants in the London Borough of Tower Hamlets:

- **Trial 1,** which commences in 2015, involves smart meters and energy saving devices (including 3 LED light bulbs, one eco kettle and one Standby Shutdown). It aims to identify the magnitude of energy savings and the impact on the electricity network when customers have access to smart meters, smart energy displays, simple affordable energy saving devices and energy saving advice but existing tariffs.

[2] In this report the term 'energy efficiency' also encompasses 'energy conservation'.

- **Trial 2,** which will run in 2016-2017, involves giving participants a special 'off peak' electricity tariff plus some devices to help support switching use to off peak periods (such as plug timers). This off peak tariff is also known as a 'time of use' tariff. It aims to assess the level, and impact on the network, of demand shifting, achieved through the introduction of a 'time-of-use' (ToU) tariff in parallel with energy-saving activities.

In addition, a pilot study has been conducted prior to the commencement of trial 1. The aim of the pilot was to provide learnings that will shape the recruitment, engagement and operational strategy of the main project trials and provide learning for the DNO community on aspects such as customer recruitment. The pilot study participants will follow the trial journey described below along with the further main trial participants recruited.



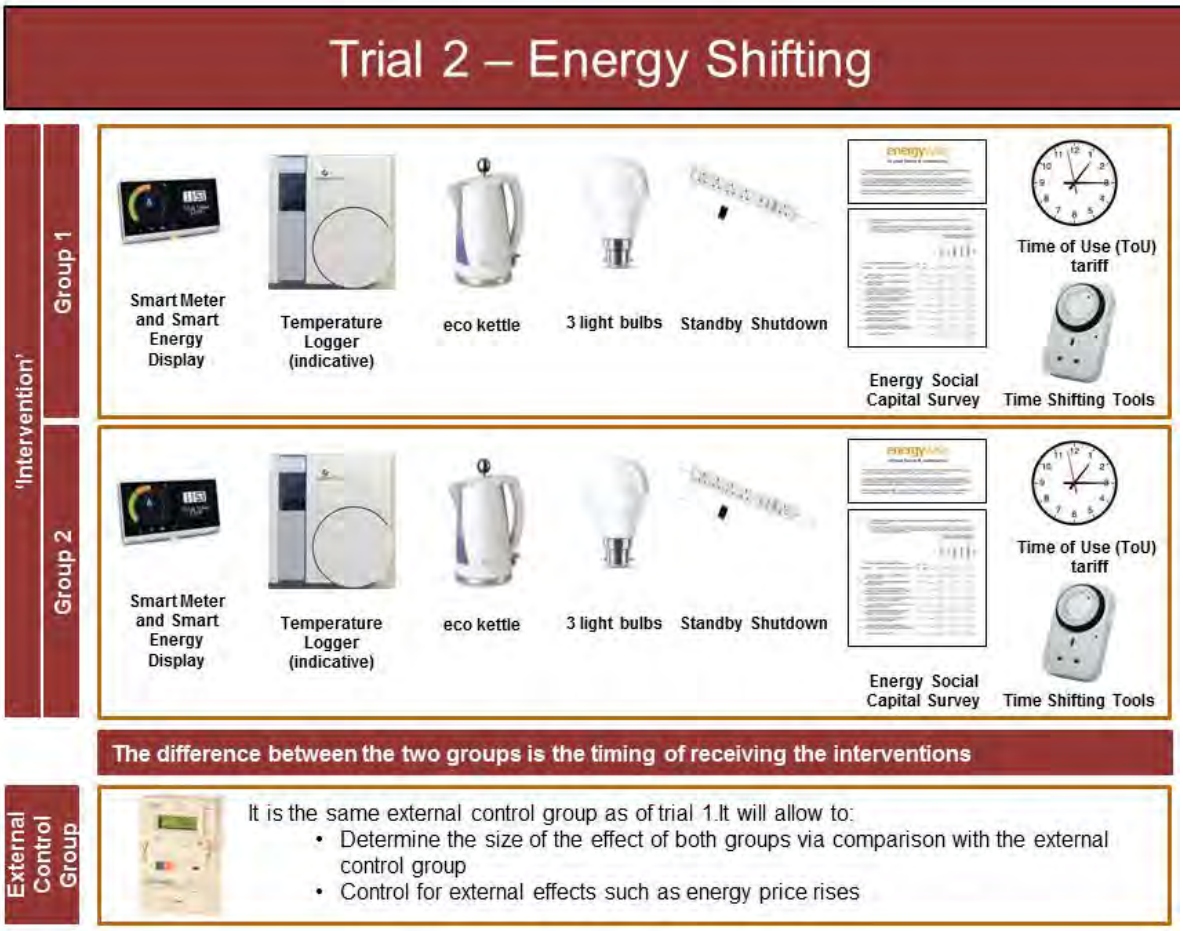


Figure 3 – The structure of the trials

1.4 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 off peak 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.

- **Quantify the demand reduction and time-shifting that these customers could provide**. The peak time for electricity consumption in the UK is typically between 5 and 8pm for domestic customers[3]. Figure 4 shows how electricity demand of all customers in the UK varies over a typical day[4]. 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 time of use tariff(s) for use in trial 2.

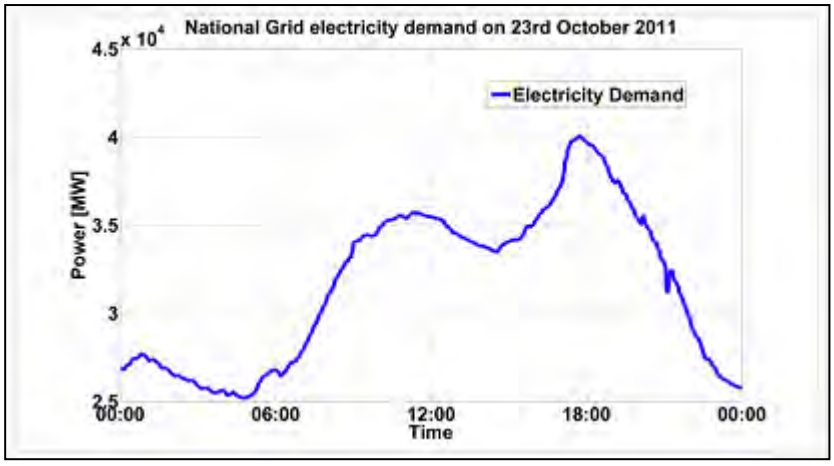


Figure 4 - electricity demand over a 24 hour period

- **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 LCNF Low Carbon London 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 will investigate how existing 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 will also investigate 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 assist DNOs in their management of increasing and uncertain demands forecasted on the electricity network.

Low Carbon London (UK Power Networks' LCNF Second Tier 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 potential to reduce their demand by an average of around 650 kWh per year[5]. Analysis of these figures suggest that a peak shift for fuel poor households of up to 200MVA across Great Britain is technically possible[6]; this is the equivalent to the output from a medium sized power station. (These figures

[3] 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

[4] Based on National Grid data prepared by Glasgow University - http://www.physics.gla.ac.uk/~shild/grid2025challenge/data.html

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

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

were based on owner occupiers rather than social housing tenants, who are the focus for this study; this project will be able to fill this gap in data.)

1.5 How is the project innovative?

The following aspects of the project are innovative:

- **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 will also investigate what opportunities can be created for the customers through an end-to-end coordinated approach between different parties in the value chain (i.e. exploration of enhanced services during a power outage). 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 potential for fuel poor customers to reduce and shift their electricity use away from peak times and quantify whether this customer group can make an impact significant enough to defer network reinforcement. The project will support DNOs to realise the potential contributions and benefits of energy efficiency and load shifting from these domestic customer groups in a sustained manner to help DNOs to manage the increasing and uncertain demands on the network. The project will identify the technical potential and scale in which fuel poor customers can engage in energy efficiency and DSR.

- **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 DNOs 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 output will provide a strategy for DNOs to 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.

  As part of the project, an energy supplier British Gas will also be 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.

The project will also involve 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 the project British Gas will be installing some of its first SMETS1 compliant smart meters with prepayment functionality outside of their trial environment. This will provide an opportunity to gain some valuable early insight as to the extent prepayment customers engage with smart meters. Smart prepayment will also bring about a range of innovative mechanisms for payment to customers with over the air top ups (e.g. via mobiles, internet) meaning no more interaction directly

with the meter and not having to worry about losing their key card. It will also open up a number of new, more convenient ways to top up such as over the phone, online and via their in home display.

- **Multiple Dwelling Units (MDU):** as part of the Project British Gas will be looking to install a MDU communications backbone in eligible building(s) which would enable the smart meter Home Area Network (HAN) services to be extended to 100% of homes in these building(s). Not only will this be a valuable technical learning, but it will provide insight into the cost of this type of infrastructure as well as the commercial arrangements required between energy supplier, the landlord and the customer. This is something that has not been fully concluded as part of the smart meter implementation programme.

2.0 The pilot study

2.1. Introduction

Prior to the main project trials, a pilot study was undertaken. This ran from 23/03/2015 to 24/04/2015 and included 36 eligible households (to whom an invitation to participate was sent). The objectives of the pilot study were to test:

- The response rate (positive response to participate in the project, which will shape the strategy in regards to the number of people that will be approached for the project trials, and will validate the initial assumption that 1,650 individuals will be approached in order to achieve 550 recruited customers).
- The customer recruitment strategy and materials.
- The operational processes between the different parties involved in the project (specifically the CFO team and British Gas).
- Survey development with a particular emphasis on respondent burden of the 'Home' and 'Social Capital' surveys. Feedback, collected through telephone interviews with Pilot project participants conducted by CAG, and analysis of survey returns, will be used to evaluate participants' responses to survey content.

The inclusion of a pilot study is standard procedure in field-trials in order to capture learnings from an initial trial of the research and technical design, and to make any adjustments necessary prior to the commencement of the full trials. A pilot study also provides the opportunity to test and ensure that processes and dependencies are applied and understood.

The pilot study was designed to replicate the process anticipated for the main trials as closely as possible in order to test all aspects of the main trial procedure. The methods deployed in the pilot have proven successful and have supported the research design proposed for the main trials. Some minor amendments to the recruitment materials and methods were made based on feedback from the pilot participants. It is anticipated that this should improve recruitment in the main trial. Both of the substantial surveys, the Social Capital survey and the Home survey, will be assessed to ensure that they are not creating undue respondent burden on participants.

2.2. Timeline

Figure 5 below shows that recruitment for the pilot that commenced on 23/03/2015 and ran until 24/04/2015. A staggered approach was taken to the recruitment, with an invitation letter and leaflet sent initially, followed by door knocking, phone calls, home visits and drop in events.

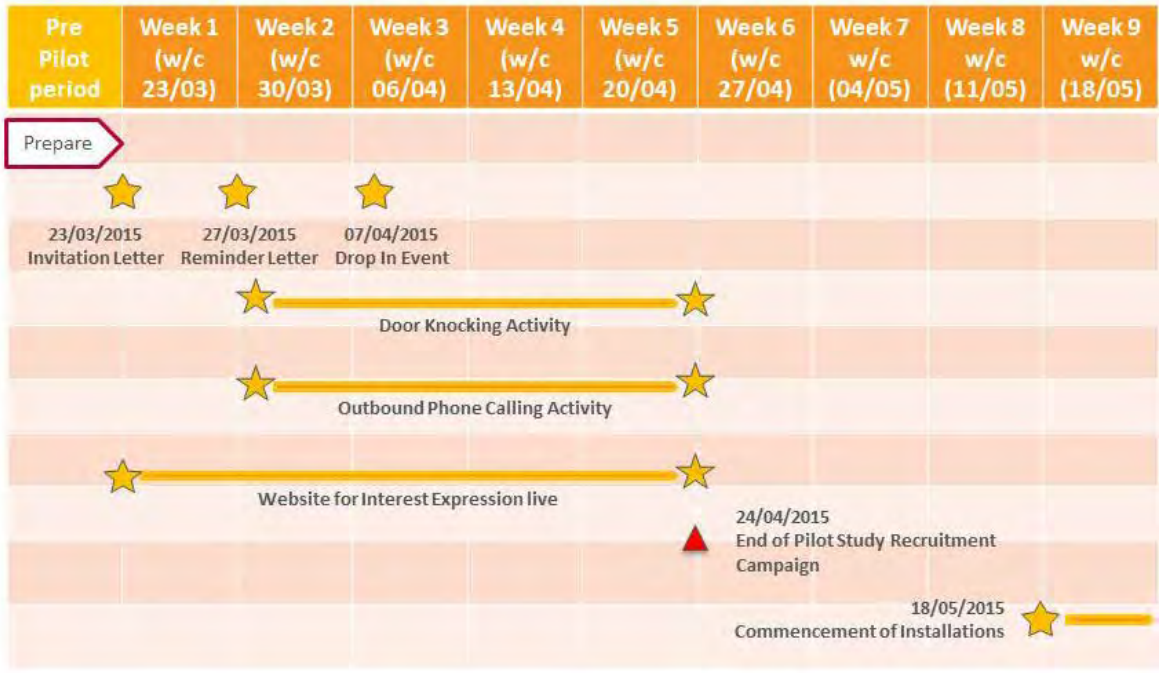


Figure 5 - Timeline of the pilot study of the project

Moving from the project's recruitment activities to installation work, the project began installations in the third week of May 2015 at households who signed-up within the pilot study. Pilot participant installs occurred later than planned as British Gas had to first conclude their contractual agreement with one of their sub-contractors, Passiv Systems, who is installing the temperature logging solution and secondary electrical meter. The project managed this period with pilot participants carefully to ensure we did not lose their sign-up through lack of engagement between signing up and installation. This included touch points from the project when administering the energy social capital survey and a customer feedback loop where each participant was called to provide comments on their experience in the project recruitment campaign. The engagement experience with the households within the interval between sign up and installation has proven to be successful as no household dropped out from the project within this period.

2.3. Pilot Participants

2.3.1 Eligibility criteria & process for selecting pilot participants

The project has adopted the 'Low Income High Cost' (LIHC) definition of fuel poverty, where a household is considered to be fuel poor if the residents have fuel costs that are above average (the national median level), and were they to spend that amount (for the fuel cost) they would be left with a residual income below the official poverty line[7]. However, the project also acknowledges the 10% definition, as the Government continues to measure according to that indicator.

To accurately determine whether a household is fuel poor would require information on the construction of the property, technology performance (e.g. boiler efficiency) and occupant behaviour. It also requires knowledge of the household income. In the absence of having all this information, proxies must be used to identify the fuel poor. However, due in part to the research design methods (random selection of a number of persons from the sample frame), and to a far greater extent to the lack of publicly available data on households' income and fuel costs, the fuel poverty indicators for this project are limited and include the following:

[7] Department of Energy and Climate Change (DECC), "Annual Report on Fuel Poverty Statistics, 2013," London.

- **Area-based**: The London borough of Tower Hamlets is an urban area, which has been identified as having high levels of deprivation[7].
- **Income**: Living in social housing is being used a proxy for the income[8] as half of residents in social housing have been determined nationally to be of low-income when compared to owner-occupiers[9].
- **Building information**: The project is using publically available data on Energy Performance Certificates (EPCs), which rate dwellings on their energy efficiency, with 'A' being the most efficient and 'G' being the least. The greater risk of fuel poverty is identified for buildings with lower EPC ratings, since low EPC rating indicates greater heat loss[10]. The summary data from the social housing organisations which are partners to the project indicated an insufficient number of properties in bands D-G. Therefore, the project is including bands C to G. In addition to targeting eligible participants in properties with lower EPC ratings, the project will be targeting participants in areas with higher levels of fuel poverty as modelled by the DECC LSOA fuel poverty statistics. These measures should increase the probability of participants meeting the 10%, and the LIHC fuel poverty definitions. The methodology with the LSOA data will be followed within trial 1 recruitment, as within the pilot study the number of households identified as eligible was not sufficiently high in order to allow for an effective use of the LSOA Analysis.

The project recognises that this method is imperfect in terms of identifying householders in fuel poverty due to the non-availability of all information about the household income and fuel costs, but presents the best method available. In order to identify participants, a list of eligibility criteria was created in order to target eligible households. This list, as below, applies to the pilot study of the project.

Criteria for inclusion of householders in the project's pilot study are the following:

- British Gas dual fuel customers,
- Tenants of either Poplar HARCA or Tower Hamlets Homes
- Property EPC rated C, D, E, F or G

Criteria for exclusion of households from the project:

- Households that have had energy efficiency improvements since October 2013
- Households that are known to be scheduled to have energy efficiency improvements over the course of the project.
- Households scheduled for demolition over the course of the project.
- Leaseholders and other non-social tenants.
- Households for which British Gas does not have annualised electricity consumption data for the year ahead of the pilot study.
- Households that had different occupiers the year ahead of the pilot study.
- Households that have Economy 7 tariff (and circuit) for electricity.
- Households that rely on communal heating, district heating or other form of heating that does not include individual gas meter.
- Households that have given notice to British Gas to switch supplier.
- Households vulnerable to power cuts, especially those who are blind, visually impaired or reliant on medical equipment. These households were excluded post their consent to participate. Within the pilot study no consented participant had to be excluded due to the vulnerability reasons.

[8] F. M. Pinkster and B. Völker, "Local Social Networks and Social Resources in Two Dutch Neighbourhoods," *Housing Studies,* vol. 24, no. 2, pp. 225-242, 2009.

[9] "Polarisation by housing tenure," 22 September 2014. [Online]. Available: http://www.poverty.org.uk/76/index.shtml.

[10] Department of Energy and Climate Change (DECC), "Annual Report on Fuel Poverty Statistics, 2013," London.

- Households with properties in a multiple dwelling unit (MDU).

The project recognised that not all required information, particularly related to the vulnerability of households, would be readily available at the time of identifying and selecting the trial participants due to knowledge gaps. However, the project incorporated a customer-oriented approach and a team of CFOs were dedicated to the continuous engagement with the trial participants. Where the CFOs identified that a trial participant was more vulnerable than initially realised, they had the capability to assess their situation and make recommendation on the appropriate course of action. If someone was identified as 'too vulnerable' to participate in the project whilst having been enrolled in the project, the CFO would have made the recommendation to the project team on the condition of the customer and should it is deemed suitable, the customer would have gone through a disengagement journey out from the project.

Further to the identification of eligible households based on the previously mentioned criterions, the project team had to categorise the eligible households according to their metering arrangements. The categorisation allowed British Gas to explore the feasibility of each eligible household for smart meter installation and target certain households for the pilot study. The eligible households have been categorised into four categories by British Gas as below:

Building categories by meter point type
A = Business-as-usual smart meter installation
B = Meter inside steel cabinets
C = Buildings with communal heating
D = Tall and difficult buildings – multiple dwelling units

Table 2: Building Categories

Category A buildings have been selected for the pilot as these are representative of British Gas's Business As Usual (BAU) smart meter installation, where no additional technologies (e.g. antennas) are required to extend the Home Area Network (HAN) signal from the meter to the smart energy display. (By focusing on the less technically challenging buildings for the pilot, it is hoped that the learning in relation to participant recruitment will be maximised, without having to face too many technical challenges at this early stage in the project.)

Category B relates to properties where the gas and electricity meters are in steel cabinets. These will require additional work to ensure the HAN signal can reach the smart energy display (e.g. further visits) and would not be considered a standard BAU install.

Category C buildings have been removed from the scope of the pilot study as further technical assessments were required in order to qualify their smart meter installations. Surveys were undertaken ahead of the trial 1 and these households were scheduled for installations.

Category D buildings are multiple dwelling units with meters in basement area and, again, there may be additional work required to ensure the HAN signal can reach the smart energy display.

The intention of the project team was to identify and approach 50 eligible households for the pilot study. However, the filters applied by multiple parties outlined above and the restriction of the eligible households to only those residing in category A buildings reduced the number of customers to 36. As a result 36 households have been identified as being eligible for inclusion within the pilot and 15 households have consented to participate after following the determined recruitment campaign.

2.3.2 Sample size and statistical rigour

The sample size of pilot studies varies according to the purpose, the final sample size, and project-specific logistical reasons. For example, Cook et al (2014)[11] reviewed studies with (non-simulated) pilots that ranged in size from 12 to 160. In terms of testing questionnaires, de Vaus (2014)[12] indicates that somewhere between 75 and 100 respondents provides a useful pilot test (p.117) while Bryman (2008)[13] recommends 100-200.

As the full sample size for the project at 550 households is perhaps smaller than other studies, and because it also has a logistical component that does not require such a large sample, it was decided the pilot study for this project could be between 25 and 50. Logistical constraints were considered, including those that could have precluded the ability to include both a control group and an intervention group in this study; in the end, both groups were included in the pilot study and main trials.

Ultimately a sampling frame of 36 identified eligible households were approached. As 36 was the total number, there was no need for random sampling: The project simply took all identified participants (which could be considered a 'census of the sampling frame'[14]. The sample was randomly allocated to either the intervention group (Group 1) or the control group (Group 2).

There are standard methods and calculations that are available for determining sample size in relation to accuracy, which aim to reduce sampling error[15,16]. These were determined for the Trials and explained in the original bid to Ofgem[17]: the target is to recruit 550 participants in the full Trials. Given the final target of recruiting 550 participants, it was originally planned that the project aims to select 1,100 participants out of British Gas customers who fit the project eligibility criteria, assuming a recruitment success rate of 50%. A 50% success rate is already below average for national scale government surveys, but was regarded as being extremely ambitious, particularly in comparison with other similar LCNF projects and other energy efficiency projects[18]. In light of this concern, it was planned ahead of any customer recruitment activity that the number of households to be approached will be increased to 1650 (1 in 3) to account for factors such as potential non-response at recruitment stage and attrition during Trial 1. This assumes a 33% successful response rate, in order to ensure the successful recruitment of 550 trial participants, in line with the project plan.

There has been evidence from at least one other LCN Fund project (Customer Led Network Revolution) that recruitment rates were even lower than the adjusted recruitment rate anticipated (i.e. 1 in 10 recruitment, instead of the anticipated 1 in 3). Though it is anticipated that the use of the CFO team will increase the response rates beyond a 1 in 10 sign up, there was uncertainty in the ability to achieve the 33% sign up rate. The size of the pilot study limited the statistical confidence with which the response rate in the full trial could be estimated. The pilot study however also serves other purposes and allows identification of process issues that we need to address in order to achieve the target 33% response rate.

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[11] Cook, J. A., et al. (2014). "Assessing methods to specify the target difference for a randomised controlled trial: DELTA (Difference ELicitation in TriAls) review." Health Technology Assessment **18**(28): 1-+.

[12] de Vaus, D. A. (2014). Surveys in Social Research. 6th edition. London and New York, Routledge.

[13] Bryman, A. (2008). Social Research Methods. New York, Oxford University Press.

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

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

[16] de Vaus, D. A. (2002). Surveys in Social Research. 5th edition. St Leonards and London, Routledge.

[17] UK Power Networks (2013) VCEE Bid Submission

[18] Brandon, G. and A. Lewis (1999). "Reducing household energy consumption: A qualitative and quantitative field study." Journal of Environmental Psychology **19**(1): 75–85.

2.4 Interventions

Within the pilot, participants received the same interventions as Trial 1 participants will. The installations have been occurring in parallel with the trial 1 installations and they were not completed as part of the pilot in isolation. These interventions are listed in the table below.

Intervention	Trial 1		Pilot Study	
	Intervention group (group 1)	Control group (group 2)	Intervention group (group 1)	Control group (group 2)
Electricity smart meter	Yes		Yes	
Gas smart meter	Yes [i]		Yes [i]	
Smart energy displays	Yes		Yes	
Time-of-use tariff	N/A	N/A	N/A	N/A
British Gas Smart Energy Expert	Yes		Yes	
Energy efficiency booklet	Yes		Yes	
Energy saving devices (three LED lightbulbs one eco-kettle and one standby shutdown)	Yes		Yes	
Energy shifting devices	N/A	N/A	N/A	N/A
Advice on energy efficiency & energy shifting devices	Yes		Yes	
CFO electricity efficiency advice	Yes	[ii]	Yes	[ii]
Referrals by CFO to further information	Yes	Yes	Yes	Yes
Newsletters	Yes		Yes	
Stakeholder support	Yes		Yes	
Dissemination events[iii]	Yes		Yes	

Table 3: Interventions of Pilot Study and Trial 1

[i] Gas smart meters only constitute part of the trial due to the business as usual smart meter rollout at dual-fuel customers who will receive both an electric and gas smart meter as part of the standard customer journey. It is envisaged that this strategy will have positive effects related to the replication point of view.

[ii] Please note, if a control group participant asks for energy efficiency advice, the CFO will refer them to standard sources of energy efficiency information.

[iii] In addition to dissemination events, some participants will attend participant panels. These are not considered part of the intervention in the trial, as it is not envisaged that they will apply to all participants or would be replicated by other DNOs under the replication model.

3.0 Recruiting fuel poor households – Review of best practice

The project undertook a pilot study to test and review the project's customer recruitment and engagement approach and best practice in engaging with households who may be struggling with fuel bills. The project was developed by earlier exercises to inform what best practices, this included a literature review and fact finding exercise of existing LCN Funded projects during bid submission.

Prior to UK Power Networks' LCNF bid submission, CAG Consultants, on behalf of UK Power Networks, researched best practice in terms of recruiting and engaging fuel poor households, through undertaking a literature review, interviewing selected project partners, suppliers and critical friends (UK Power Networks, UCL, NEA, Institute for Sustainability and British Red Cross) and identifying key lessons from other LCNF funded

projects. Detailed findings from this are presented in the project's Communications Plan[19]. In addition, key industry players were interviewed in order to provide input into the project's Communications Plan, which outlines the engagement strategy with the targeted population.

3.1 Literature review

To ensure that the review was rigorous and effective, a set of review protocols were established to inform the selection of literature, using the principles of a Campbell Systematic Review.

- Subject matter; engagement with customers on energy efficiency measures, learning regarding engaging the target audience;
- Population – vulnerable or fuel poor households;
- Language – work in English; and
- Date – produced in the last five years.

All literature was scrutinised for evidence in the following areas, with relevant data collated in a review database:

- Type of recruitment and engagement used, with a focus on what worked well and what worked less well plus lessons learnt. This covered recruitment, engagement, maintenance, number of participants and dropout rates;
- Delivery costs and cost benefits of holistic/partnership approach;
- Methods used to measure outcomes and impact; and
- Codes of practice used.

The full list of literature reviewed is presented in the project's Communications Plan[20].

3.2 LCNF factsheets

During the full bid preparation, a specific LCNF factsheet was developed to gather information on how customers had been recruited and engaged within other LCNF projects. This was sent to the LCNF coordinators of DNOs that had previously been awarded LCNF funding for projects that had involved the recruitment of customers.

Factsheets were returned from eight projects and a sheet was completed from a ninth project where sufficient information was gleaned from initial information sources.

DNO	LCNF Tier	Project
Scottish Power Energy Networks	Tier 1	Ashton Hayes Smart Village
Scottish and Southern Electricity Power Distribution	Tier 2 Tier 2	Northern Isles New Energy Solutions Thames Valley Vision *
Northern Powergrid	Tier 2	Customer Led Network Revolution
Western Power Distribution	Tier 2	SoLa Bristol
Electricity North West Limited	Tier 2 Tier 2	Customer Load Active System Services Capacity to Customers
UK Power Networks	Tier 2 Tier 1	Low Carbon London Validation of Photovoltaic Connection Assessment Tool

* Factsheet populated from initial information gathered

[19] UK Power Networks (2013) Vulnerable Customers and Energy Efficiency Communications Plan for Pilot Study and Project Trial

[20] UK Power Networks (2013) Vulnerable Customers and Energy Efficiency Communications Plan for Pilot Study and Project Trial

3.3 Project partner interviews

Based on the best practice identified from the literature review and LCNF factsheets, CAG Consultants established that there was a key set of skills required to ensure effective delivery of the recruitment and engagement strategy. In order to ensure that the project team had, between them, this set of skills, face to face interviews were conducted with, and skills audits completed by, UK Power Networks as well as representatives of four of the project's partners and associates; NEA, the Institute for Sustainability, University College London and British Red Cross (the latter is acting in the capacity of being a 'critical friend' to the project).

3.4 Consultation with experts in the field

Experts in the field were interviewed to gather their views on the most effective ways of recruiting and engaging participants to a project of this nature. A total 12 experts were interviewed from 11 organisations. These included fuel poverty practitioners, academics and industry representatives.

3.5 Key findings and how these have been incorporated into the energywise recruitment

The following table summarises the findings from the literature review, LCNF factsheets, partner interviews and consultation with experts.

Principle	How is this included in the project's recruitment plan?
Consider using pre-engagement research to design incentives, interventions and communications methods which will work with the target groups[21].	A focus group with Tower Hamlets residents was held in June 2014 to test key messages and communication materials. **PILOT STUDY LEARNING POINTS** Feedback on the communication materials, recruitment strategy and role of the CFO team has been gathered through qualitative interviews with participants of the pilot study. The interview outcomes resulted in minor improvements in the communication materials, while the main messages and strategy did not alter, as they have shown to be effective in customers' recruitment and engagement. The positive feedback from the participants demonstrate the usefulness of conducting a focus group with a sample population ahead of rolling out the recruitment strategy in order to identify the needs of the customers and customise communication materials and a strategy that will target those needs specifically. **The key learning outcome, as also suggested by the literature review, is that a focus group with a sample population should be included in the pre-engagement research in order to tailor the communication materials and strategy to the targeted customer pool.**

[21] LCNF Factsheets

Principle	How is this included in the project's recruitment plan?
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[22].	Face to face communication is a key component of the recruitment for this area-based community project. **PILOT STUDY LEARNING POINTS** The recruitment strategy of the project involved mailing invitation and reminder letter, undertaking door knocking activity and then following with outbound calls. As was suggested by the literature review, the door knocking has proven to be the most effective means of recruiting customers in the project. Door knocking activity resulted in 60% of the sign ups of the pilot study (9 out of 15 customers). Although the most effective means of recruiting customers will be further validated during the main trial recruitment phase, **the key learning outcome from the pilot study is that door knocking is an effective mean of recruiting customers and should further community engagement be undertaken by DNOs, the door knocking activity is highly recommended to be included in the communication strategy.**
Keep Terms and Conditions very simple[23].	Every effort has been made to ensure the Terms and Conditions are as simple as possible. **PILOT STUDY LEARNING POINTS** DNOs normally do not have a direct relationship with the customers, except from cases of power outages, etc., as energy suppliers own the contractual relationship with the customers. Within the project, it has been decided for the DNO to own the relationship and thus the terms and conditions with the customers. Feedback from the qualitative interviews with the participants resulted in no comments for improvement of the terms and conditions. It has been proven that the project has balanced the need for simplified terms and conditions, along with the need to include all necessary legal clauses, successfully. The suggestion from the literature review is validated and **the key learning outcome is to ensure that the terms and conditions are as simple as possible. However, attention should be paid to the inclusion of all necessary contractual items in the terms and conditions, in order for the customer to have a clear idea of all activities and obligations involved.**

[22] LCNF Factsheets

[23] Raw G & Ross D (2011) Energy Research Project, Final Analysis, AECOM

Principle	How is this included in the project's recruitment plan?
Have a relatively short deadline for responding to an invitation to take part (e.g. two weeks)[24].	The initial letter emphasises that places on the trial are limited to help incentivise timely sign-up. A reminder letter was sent to customers a week after the initial letter to prompt them to respond. **PILOT STUDY LEARNING POINTS** Although no explicit deadline for customer responses has been included in the invitation letter, it has been demonstrated that most of the customers responded to the invitation letter within the first two days. The impact of the reminder letter cannot be easily quantified as it coincides with the effect of the door knocking activity (which commenced at the day that the customers received the reminder letter).
Systematically follow up letters with telephone calls[25].	The project's recruitment process involves systematic follow up through door knocking and then telephone calls. **PILOT STUDY LEARNING POINTS** The pilot study of the project demonstrated that the most effective means of recruiting customers is the door knocking activity which resulted in 60% of the sign ups. The second most effective strategy for recruitment was the outbound calls, where the CFO team followed up with the customers. The outbound calls resulted in three sign ups in the pilot study, which accounts for 20% of all consented customers.
Offer guarantees and a 'remove and make good' clause for people leaving the programme[26].	Participants will not have an option to have their smart meter removed as they are part of the smart meter roll out. The other equipment provided through this project (energy efficiency devices) can be removed by the project, if the customer wishes, without any damage to their property. The dataloggers and temperature monitoring devices will be removed at the end of trial 2 respectively, without any damage to the customers' property. The project plan, during the term of the trials, is that if the issued energy efficiency and time shifting tools break, these will be replaced. **PILOT STUDY LEARNING POINTS** These items above have been clarified within the terms and conditions that were issued to the participants of the pilot study. Considering that no customer provided feedback for improvement of the terms and conditions, it is believed that these clauses have been clearly communicated to the customers and achieved their objectives, which was to reassure the customers for our processes. As literature review suggested, t**he key learning outcome is to include in the terms and conditions all necessary clauses that reassure the customers of the legitimacy of the project and involved organisations and offer reassurance that they will not be impacted by the project if they decide to leave the project at any time.**

[24] Raw G & Ross D (2011) Energy Research Project, Final Analysis, AECOM

[25] Raw G & Ross D (2011) Energy Research Project, Final Analysis, AECOM

[26] Institute for Sustainability (2013) Home Energy Systems Trials – A summary of learning to inform future projects (part 2 – TSB funded project)

Principle	How is this included in the project's recruitment plan?
Accept a statement of commitment from recruited customers by phone rather than in writing[27].	The project consent process includes the option to sign up by phone instead of face to face. This verbal consent was and will be followed up with a confirmation letter. **PILOT STUDY LEARNING POINTS** The split between customers consenting verbally and customers consented in writing was 33% and 67% respectively for the pilot study. Verbal consent was provided by the customer to the CFO team over the phone, while consent in writing was provided during door knocking and home visits. The difference in the percentage is attributed to the fact that the door knocking activity was the most effective means of recruiting customers to the project. Through the pilot study, the suggestion from the literature review is validated. However, a key learning outcome will be provided at the end of the project, once the installation, operation and decommission of the monitoring equipment has taken place and would reveal any implications of the consent given.
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[28].	The CFO team is in place to support participants throughout the trials via several means, such as the provision of energy advice and systems to monitor participants' welfare. **PILOT STUDY LEARNING POINTS** Within the recruitment phase of the pilot study, the CFO team offered their support to the approached customers. Considering the feedback from the qualitative interview with the participants, the main motivations of the consented customers in participating to the project were mainly driven by the possibility of continuous cost reduction through reduced energy bills, vouchers, energy saving devices and being part of a research project. Although the impact of the offering of support by the CFOs cannot be quantified in number of uptakes it is believed that such an intention gives the impression of an approachable and supportive project team. **The key learning outcome is that the possibility of continuous cost reduction through lower energy bills is the main motivator of most participants in taking part to the project** and whether the organisation needs to offer support by the CFO team needs to be re-assessed on case by case study and will depend on the support required by the customers..

[27] Raw G & Ross D (2011) Energy Research Project, Final Analysis, AECOM

[28] Institute for Sustainability (2013) Home Energy Systems Trials – A summary of learning to inform future projects (part 2 – TSB funded project)

Principle	How is this included in the project's recruitment plan?
Minimise the time between recruitment and installations (e.g. two weeks rather than six weeks). Linked to this, have installation resources organised to avoid delays from sign-up to installation[29].	The project aims to schedule installations shortly after sign up where possible. The pilot study has been organised in such way that the installation of equipment to participants of the pilot and participants of the trial 1 will occur in the same time. **PILOT STUDY LEARNING POINTS** Installations for the pilot study of the project are currently undertaken along with installation of trial 1. Although installations did not occur two weeks after sign up, to date no participant has dropped out of the project due to time lag between sign up and installation. Customers' expectations have been managed by tailoring the materials, with no established installation date being communicated upfront during the sign-up process. It is worth noted through that one participant has asked the CFO team when they will receive their smart meter.
Face to face contact will generate a far higher response rate than marketing by leaflet[30]. Offering an out-of-hours service will maximise the effectiveness of door-knocking[31].	Face to face door knocking is the project's primary means of recruitment with an out-of-hours service offered. **PILOT STUDY LEARNING POINTS** As explained earlier, the door knocking activity was the most effective means of recruiting customers. In addition, the most effective day and hour for door knocking (in respect to sign ups) proved to be Saturday afternoon. Further effective times for door knocking are 12pm – 2 pm and early evenings. **The key learning outcome is that the best time for engaging with customers and obtaining their consent to participate is during Saturday afternoon. For future customer engagement is recommended that out of office hours and weekends to be included within the recruitment strategy.**
Provide appropriate incentives and budget for ongoing support to keep participants engaged[32].	Participants will be offered compensation payments and the project includes budget for ongoing support and engagement activities. **PILOT STUDY LEARNING POINTS** 80% of the participants who provided feedback to the project team responded that the main driver for their participation was the possibility of continuous cost reduction through reduced energy bills. The vouchers and incentives are the second motivation for their participation, which has been included in the responses of 40% of the interviewed participants. **The key learning outcome is that in order for the energy efficiency and demand side response campaigns to be effective in customer engagement, they need to provide assurance to the customer about savings and cost reduction in the long term horizon**.

[29] LCNF factsheets
[30] National Energy Action (2005) Warm Zones pilots
[31] Energy Saving Trust (2011) Renew Rollout Evaluation Report 2011-12, GLA
[32] LCNF factsheets

Principle	How is this included in the project's recruitment plan?
Respond quickly to complaints to minimise drop-out[33].	Customer complaints will follow the five step Bromley by Bow Centre procedure already in place. If an enquiry is of a technical nature related to the Smart Meter (e.g. the IHD is not functioning properly), then the customer will be signposted in project communication materials to the British Gas call centre operatives. Complaints will be escalated from the British Gas call centre to the project team who will decide on the best course of action. **PILOT STUDY LEARNING POINTS** The project has well established processes in place in order to handle complaints. To date, no customer complaint has been received.
Know your occupants; understanding their social characteristics and lifestyles is essential to being able to effectively engage with them and support them in adapting to new technologies. Similarly, know their thermal preferences[34].	The project is working with three local partners – Tower Hamlets Homes, Poplar HARCA and Bromley by Bow Centre – to provide knowledge of targeted households. In addition, customers will be asked – via a survey – about household characteristics to help in understanding the customers' needs. Recruitment of CFOs has been led by these three organisations allowing them to control this aspect. **PILOT STUDY LEARNING POINTS** Considering that door knocking and personal interaction have been the most effective means of recruiting customers, it is proven that having employed a team of people with knowledge of the local area and culture and sharing characteristics with the targeted customer pool, is an effective way of building a relationship of trust between the customers and the CFOs. In addition, the social housing landlords, Poplar HARCA and Tower Hamlets Homes shared local intelligence with the team of CFOs in order for the latter to become aware of additional social characteristics they may not be aware of. **The key learning outcome is the validation of the literature review and the importance of involving organisations who employ people who understand the culture and needs of the targeted customer pool.**
Positive communication with occupants is essential to supporting occupants through any retrofit process.	The participant literature has been written in a way that is designed to be engaging and understandable to participants. The focus group held in June 2014 helped to test key materials to ensure they are suitable. CFOs have been trained in positive and appropriate customer interaction. **PILOT STUDY LEARNING POINTS** As explained earlier, the feedback of the customers in respect to the communication materials did not generate any major feedback for improvement and thus it is proven that the pre-engagement process with focus groups was successful in understanding the needs of the prospective participants.

[33] LCNF factsheets

[34] Institute for Sustainability and University College London (2013) Post occupancy interview analysis report Key Findings; Analysis of a selection of Retrofit for the Future projects, published by Institute for Sustainability

Principle	How is this included in the project's recruitment plan?
Provide honest, upfront information to customers, for example outlining what will happen with data, clarifying any implications of being involved in the scheme[35]. Linked to this, a customer panel can ensure that the views of the group are heard and responded to[36].	The CFO team will explain Key Facts reflecting the terms and conditions of the project to customers in a clear and honest manner. The team will provide ongoing support to handle customer queries and concerns. A participant panel will be set up to ensure that there is ongoing feedback from participants. **PILOT STUDY LEARNING POINTS** As part of the pilot study, interviews with the consented customers have been undertaken in order to obtain their feedback on processes, strategy and materials. All 10 interviewed participants were positive about the materials and responded that information was clear and of the right length.
Don't over-rely on monitoring technology to provide feedback data while ignoring adaptive and behaviour aspects, e.g. occupants' habitual strategies for controlling their own thermal environment[37].	The CFO team had regular contact with the participants of the pilot and will maintain the regular interaction throughout the project trials. Research surveys will be used to identify social (i.e. non-technical) support for behavioural aspects of energy use. **PILOT STUDY LEARNING POINTS** Within the pilot study of the project, 73% response rate has been achieved to the energy social capital survey which has been administered to the consented customers. Overall, feedback from the customer field officer team indicated that the customers react positively in the team and the engagement of the team as in several cases the customers have proactively sought the CFO team's support.
Provide non-technical information to explain issues to participant (e.g. prepare FAQ sheets). If delays do happen, communicate fully[38].	Communication materials have been designed in a clear, non-technical manner and were tested at the June focus group. In addition, the project team has developed a FAQ sheet which has been used by the CFO team during the pilot in order to answer potential questions from potential customers in a clear and comprehensible manner. **PILOT STUDY LEARNING POINTS** The CFO team has reported that the frequently asked questions document was useful in answering many customer questions and they kept it a 'living' document with more questions added in post pilot, based on the questions asked by the customers.

[35] Partner interview with UK Power Networks, 2013.

[36] Partner interview with UK Power Networks, 2013

[37] Institute for Sustainability and University College London (2013) Post occupancy interview analysis report Key Findings; Analysis of a selection of Retrofit for the Future projects, published by Institute for Sustainability

[38] LCNF factsheets

Principle	How is this included in the project's recruitment plan?
Tailor communication methods to the target audience. Have a Freephone number for participants to call. Market test website with representatives from the target audience before it is launched to ensure it is easily accessible. In all cases, technical language should be avoided[39].	Communication methods have been tailored to the target audience, with both written and verbal communication offered and materials presented in an easily digestible format. The focus group in June 2014 tested the materials with the target audience. There is a Freephone number (0800) as well as a geographic landline number (020) for customers to call. Technical language in all communication materials has been minimised. The website developed for the pilot study depends heavily on the communication materials and language that has been tested with the focus group in June 2014. **PILOT STUDY LEARNING POINTS** The website reflected the communication materials, which, as explained proved to be successful for recruiting customers. It should be noted that only one customer has contacted the CFO team through the website form, while the majority of the approached customers who showed interest preferred to call the CFO team.
Have a programme of providing ongoing advice and feedback to customers. The objective should be to create a sense of community and keep all participants feeling involved[40].	There will be regular newsletters, a series of events and regular interaction between participants and the CFOs. **PILOT STUDY LEARNING POINTS** The pilot study has been scoped as the test environment of the project processes and CFO team. It has been decided not to engage with the participants of the pilot through newsletters and instead undertake the continuous engagement with both pilot and trial 1 participants post pilot study. It should be noted though that all communication materials provide clearly the message that the CFO team are available for any questions at any time.
Offering information in a range of relevant languages is important for reaching hard to reach vulnerable groups, whilst arranging to have a family member to translate can help to generate trust[41].	Customers may indicate that they need the communication materials in a more suitable format. Each request will be assessed and the communication materials will be provided in a modified format as long as it is realistically achievable. **PILOT STUDY LEARNING POINTS** The languages included in the translation sheet for the pilot study, from which the customers were able to choose their preferred language, were Bengali, Somali, Arabic, and Chinese Cantonese, Chinese Mandarin, Spanish and Turkish. It should also be noted that the CFO team was able to speak Bengali to customers that did not speak English and such engagement in their common language increased the trust between the parties and resulted in sign up. **The key learning outcome in relation to the languages is to employ local people with common characteristics and culture with the local community in order for the customers to feel more confident when engaging with the project team.**

[39] LCNF factsheet and Partner interview with UK Power Networks, 2013
[40] Partner interviews, 2013
[41] Partner interview with NEA, 2013

Principle	How is this included in the project's recruitment plan?
Plan how to deal with households who are keen to participate but whose houses are not suitable (e.g. offer an alternative intervention if possible)[42].	Customers not eligible for the trials will not receive any project literature and the project will not be advertised to them. Should a customer that has been approached as eligible for participation and then found not to be appropriate to include them, a disengagement letter along with a customer charter (including support programmes, energy efficiency information, etc.) will be provided to them. Energy efficiency materials will also be offered to any customers who express an interest in the project but are not eligible. **PILOT STUDY LEARNING POINTS** The project has processes in place in order to avoid approaching customers who are not eligible for participation and also to disengage customers that have approached by error and found to be ineligible for participation. Within the pilot study of the project, seven customers found to have a vulnerability flag associated with them. This information came either from the project partners or the CFO views. After careful review of the situations, it has been decided that all customers can remain in the project and be scheduled for installations, as none of the vulnerability flags was related to technological limitations (i.e. for blind, visual impaired persons) or related to reliance on electrical equipment for medical reasons.
Consideration needs to be given to developing a joint brand and to which Partner logos participants are most likely to respond to[43].	The project has developed a joint brand designed by a design agency. **PILOT STUDY LEARNING POINTS** During the pilot evaluation phase it has been noted that not many customers have opened their invitation letter and feedback from one customer was that they would open it if they knew it was coming from their social landlord. Therefore, in order to increase the chances of the customers responding to the project's communication materials, the logos of the two social landlords have been added to the project envelopes. The key learning outcome is that most tenants have a trusted relationship with their landlord and as a result partnering with a social housing landlord will be beneficial for accomplishing the targets of the customer engagement.

Table 4: Findings from Literature Review and Key Learning Points from the Pilot Study

4.0 Trusted intermediaries

4.1 Importance of using trusted intermediaries

Historically, UK Power Networks has had very little contact with householders. Most householders would only have contact with their DNO in the event of a power outage, when there is need for a new connection, in cases of meter cut outs or outage management. Some customers (e.g. those who are particularly vulnerable to suffering during a power outage) will also have been placed on UK Power Networks' Priority Services Register. In the past, national initiatives to address fuel poverty have not involved DNOs, and have mainly been directed through energy suppliers, governmental or charity bodies. It is therefore unlikely that many of

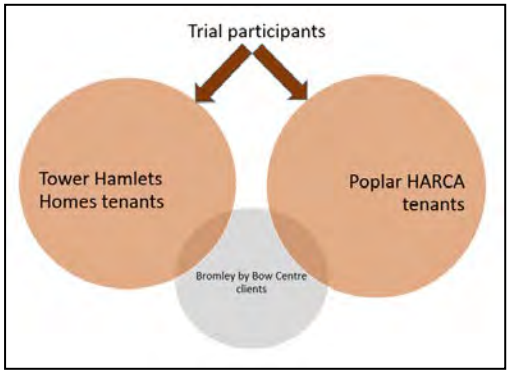

Figure 6 Relationship between local partners and trial participants

[42] LCNF factsheets, 2013
[43] Partner interview with UK Power Networks 2013

the targeted audience for this project would be aware of UK Power Networks and the services that they provide. UK Power Networks is working with local community actors, in addition to an energy supplier, to engage with customers for this project.

The term 'trusted intermediary' refers to an organisation which is trusted by a particular group of people and which can facilitate agreement between those people and another organisation. Local, trusted organisations are important for engagement; the easiest way to find people who are hardest to reach is through organisations that are likely to have contact with them[44]. Having local partners who are both trusted and who have a vested interest in a good quality service being delivered is critical to engaging with vulnerable people; these agencies act as an honest broker[45]. Best practise suggests the involvement of local partners (such as social housing providers and community centres) in the engagement with fuel poor or vulnerable groups[46], as they are likely to have good local knowledge and high levels of trust from the project's customer group. The maintenance of a meaningful, reciprocal relationship between researchers and the key players of community organisations is often the sustaining source of success as the research project unfolds[47].

4.2 Identified trusted intermediaries in the trial area

All project participants will be tenants of either Tower Hamlets Homes or Poplar HARCA. As housing providers, these organisations will be well known to their tenants and could be viewed as trusted organisations by their tenants. Some project participants will also be clients of Bromley by Bow Centre, which is a highly respected and trusted local community organisation. (See Figure 6)

4.3 Mapping of other intermediaries in the area

In order to understand the people and organisations that householders trust in the area of Tower Hamlets (apart from the project partners presented in the previous section), trusted social resources have been mapped through an exercise referred to as 'stakeholder mapping'. The purpose of the stakeholder mapping is simply to relay the key messages of the project and build confidence in the community around the project, as well as raise awareness and possibly allay any concerns should (potential) participants approach the 'stakeholders'.

In general, the principles of stakeholder mapping as identified by the organisation Business for Social Responsibility (BSR 2011) (p.1) were followed. The process has 4 steps:

1. **Identifying:** listing relevant groups, organisations, and people
2. **Analysing:** understanding stakeholder perspectives and interests
3. **Mapping:** visualising relationships to objectives and other stakeholders
4. **Prioritising:** ranking stakeholder relevance and identifying issues.

4.3.1 Identifying

As Fell et al (2009) summarise, the process involves seeking to identify catalytic individuals, people who are opinion leaders, influencing social norms, and a maven, influencing information flows. It was also possible that catalytic organisations would be identified, in which no single person is necessarily regarded higher than another, but the whole organisation is known as a trusted source of information in the community.

[44] Energy UK (2012) Reaching and engaging consumers who are vulnerable or at risk of fuel poverty: Energy UK workshop report

[45] Bates I, Allen D & Rogers M (2013) Reaching the fuel poor – a how to guide, Umbrella Fair; Partner interview with UK Power Networks interview 2013

[46] LCNF Factsheets

[47] Leonard , N.R. et al. (2003), Successful recruitment and retention of participants in longitudinal behavoiural research, AIDS Educ Prev 15(3): 269-281

The method of identifying catalytic individuals involved using a combination of Judge's Ratings for identifying opinion leaders[48] and stakeholder mapping[49]. The Judges' Rating technique uses knowledgeable individuals within a community to identify potential opinion leaders rather than project staff[50]. Combined with snowball sampling method (asking people to identify others to speak to) it was believed that this would yield enough individuals in the community to get a good understanding of who are the trusted people and organisations.

As three partners of the project are in the local community already, the stakeholder mapping started with them. Each local project partner was approached (Tower Hamlets Homes, Poplar HARCA and Bromley by Bow Centre), brief interviews held with the primary contact, and names of others to approach within each organisation or in other organisations were collected. The focus of the exercise was on those organisations which may be trusted, either as a whole organisation or individuals within those organisations.

The brief initial interview was semi-structured and focused broadly on the following items:

- People in your organisation that people in the area seem to trust for advice.
- Organisations or people who are particularly influential regarding home electricity use and demographic of people they influence.
- Anyone we should tell about the project, even if they don't have anything to do with energy efficiency, because they are highly connected in the community.
- Referrals to people or organisations to speak to about the project.

4.3.2 Analysing

BSR[51] suggest analysis assigning values (e.g. low to high) to each 'stakeholder' or catalytic individual or organisation according to five criteria grouped into three categories, as summarised in Table 5.

Category	Criteria	Definition
Expertise	Contribution	Does the organisation have information or expertise on energy efficiency, in particular?
	Legitimacy	Could organisation be considered an expert or support service for energy efficiency?
Willingness	Willingness	Are they willing to be involved?
Value	Influence	How much influence does the organisation have?
	Necessity of involvement	Would it be detrimental to *not* involve the organisation?

Table 5: Stakeholder mapping categories & criteria

For the purpose of the mapping the rating system suggested by BSR (2011) was adapted to the project by assigning numeric values for each criteria (from Low = 1 to High = 5) and then averaging those assigned to the Expertise and Value categories. However, it was difficult to analyse each criterion, due to limited information provided about certain organisations, and a significant amount of judgment was necessary. Thus, the ratings were rough and could be interpreted differently with more information, or different judgement. Sometimes there was little to no information on organisations. In such cases, a coding system was devised to assign average values to organisations for which there was no information. This resulted in many organisations (indicated with

[48] Valente, T. W. and P. Pumpuang (2007). "Identifying Opinion Leaders to Promote Behavior Change." Health Education & Behavior 34(6): 881-896

[49] BSR (2011). Stakeholder Mapping. New York, Business for Social Responsibility. http://www.bsr.org/reports/BSR_Stakeholder_Engagement_Stakeholder_Mapping.final.pdf [Accessed 14 August 2014]

[50] Valente, T. W. and P. Pumpuang (2007). "Identifying Opinion Leaders to Promote Behavior Change." Health Education & Behavior **34**(6): 881-896

[51] BSR (2011). Stakeholder Mapping. New York, Business for Social Responsibility. http://www.bsr.org/reports/BSR_Stakeholder_Engagement_Stakeholder_Mapping.final.pdf [Accessed 14 August 2014]

letters A, B & C) being assigned the same values depending on the nature of the organisation as indicated in Table 6 (for instance, faith-based groups, children's centres, older age-based and disability-based organisations or other community groups). Following this analysis, in order to reflect the disproportion of the information provided, the organisations have been grouped in two different families: organisations indicated by numbers (from 1 to 11) and organisations indicated by letters (A, B & C). The difference between the two families are summarised in Table 7.

Group type	Expertise		Willingness to engage	Value	
	Contribution	Legitimacy		Necessity of involvement	Influence
Faith based groups	High	Low	Medium	Medium	Medium
Children's centres / similar	High	Low/Medium	High	Medium	Medium
Older age-based organisations	High	Medium	Medium	Medium	Medium
Disability-based organisations	High	Medium	Medium	Medium	Medium
Other community groups	High	Medium	Medium	Medium	Medium

Table 6: Ratings for organisations for which there was no information

Organisation families	Number of organisations	Description
Numbers: 1-11	11 organisations (each number represents a separate organisation)	Individual organisations for which detailed information was provided.
Letters: A-C	65 organisations (4 in A, 18 in B and 43 in C)	Organisations for which little to no information was provided, therefore required analysis based on average values depending on the nature of the organisation (faith-based groups, children's centres, older age-based and disability-based organisations or other community groups).

Table 7 Classification of organisations identified by stakeholder mapping

4.3.3 Mapping

Mapping is a simple way to make the above analysis more visual, and to clarify who to approach in the community to communicate the message of the project. BSR (2011) suggest a simple four-quadrant 'map' of the criteria as per Figure 7. Each circle with a numerical value represents a single organisation. Those with an alphabetical value represent 4 or more organisations which all had the same rating.

4.3.4 Prioritising

The final step was to prioritise which person or organisation to approach first. This exercise prioritised engagement with those with high willingness, expertise and value (e.g. resource 1 in Figure 7). The CFOs will be responsible for approaching these people or organisations, relaying the message of the project and building confidence in the community around the project, as well as raising awareness should participants approach the 'stakeholders' (catalytic individuals or organisations).

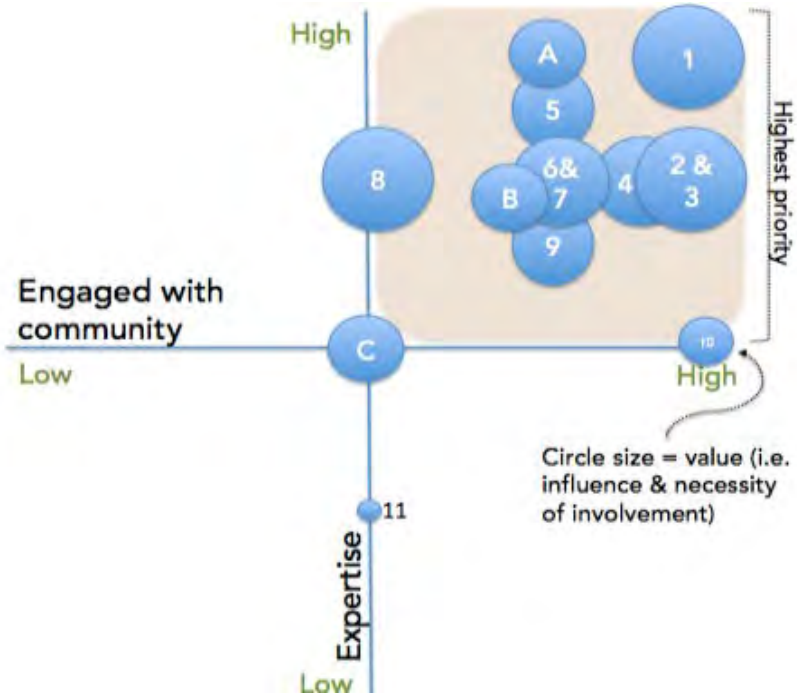

Figure 7 Stakeholder map based on results of analysis. As described in Table 7, numbers indicate individual organisations for which detailed information was provided, while letters represent clusters of organisations for which little to no information was provided. Note that numbers in the same bubble indicate organisations with the same value associated.

In general, the priority for approaching organisations is to follow numeric values and then alphabetical values (with the exception of circle 11, which is of lowest priority), though it does not have to be that strict. It may be that some organisations will be physically close to another, or familiar to the CFOs, so could be approached in a slightly different order. In summary, the aim of the process is to prioritise which person or organisation would have the greatest effect on the recruitment process, therefore should be approached first.

4.3.5 Results

The 'stakeholder mapping' exercise was conducted by UCL during the pilot study, and results of the prioritising were communicated to the CFO team. 80 organisations were indicated during the interviews as 'stakeholders' and 76 of those were identified as worth approaching, mapped and prioritised against willingness, expertise and value. The CFO team has started approaching these stakeholders and will continue to do so throughout the trial, until the list is exhausted. The feedback to date has been positive.

5.0 Social capital survey

5.1 Introduction

The social capital can broadly be defined in two ways:

- 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).

Most social capital studies adopt one of the definitions, but rarely both. However, examining both in a given community may offer deeper insights and assist in the development of community programmes. Thus far, there is evidence that individual level social capital is associated with adoption of energy efficiency innovations,

though it varies by technology and community[52]. However, there is also research that suggests general social capital and general trust levels may be lower amongst low-income householders[53]. Low-income householders, particularly those living in inefficient buildings, are at great risk of fuel poverty, which is very broadly defined as those unable to maintain a minimum comfort level at a reasonable cost. The potential limited social capital available amongst the fuel poor, particularly in urban areas, presents a challenge to community energy efficiency programmes.

5.2 Aims and objectives

The common definition of social capital is meant to cover various aspects of life, not just information on energy efficiency. In order to distinguish from the more commonly-researched general social capital, the project only examines what is labelled as energy social capital, i.e. those information resources related to household energy use embedded in social networks, and the research questions and hypotheses were based on this definition.

The overall aim is to understand the extent of energy social capital and associated elements of trust amongst participants in Tower Hamlets. Understanding collective social capital, and particularly trust, in a given area can help shape the aims and expectations of programmes. Understanding individual social capital can help target awareness-raising and engage with individuals in a community in ways that are both more intuitive for them, and more effective for the project.

The objectives of the social capital survey are to:

- Collect information on where participants find energy efficiency information;
- Collect information on which personal (and non-personal) sources they receive the information from; and
- Collect information on who participants trust for advice.

5.3 Method

5.3.1 Research design

A longitudinal research design is one in which data are collected on at least one sample on at least two occasions separated in time, typically using either a cohort (same people) or panel study (samples of participants at two points in time). This is the design chosen in this research, as it provides us the opportunity to learn how people change over time.

1. It is not expected that people will necessarily only speak to people once about energy efficiency; and
2. It is hypothesised that people will speak to others more during an intervention such as the present project.

The research participants for this social capital survey will be all those who are participating in the trial, in Groups 1 and 2. The survey will be administered at three times:

- At the beginning of Trial 1 (or during the Pilot study, if a participant is recruited at that point);
- At the beginning of Trial 2, and
- At the end of Trial 2.

[52] 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.

[53] Steijn, S. and B. Lancee (2011). Does Income Inequality Negatively Affect General Trust? Examining three potential problems with the inequality-trust hypothesis. GINI Discussion Paper 20. Amsterdam, AIAS.

5.3.2 Questionnaire content and design

The questionnaire content was based on the research of McMichael (2011[54]), which examined individual 'energy social capital' amongst small, rural communities. The content was altered and added to, in order to meet the aims and objectives of the project and to understand more about the trial population, and to include collective social capital questions on trust. The questionnaire asks questions such as:

- Length of time the participant has lived in the neighbourhood
- Satisfaction with the area
- Neighbourhood trust
- General trust
- Information-seeking in the past and the future
- Energy efficiency resource generator (asking which groups of people respondents might speak to about certain energy efficiency questions)
- Name generator (asking who respondents have actually spoken to in the recent past)
- How people find energy efficiency information

Most questions were based on either previous standards established in national or international surveys[55] or in previous social capital work[56], though some are completely bespoke for this project**. The questionnaire is relatively short (approximately five pages of questions in an eight-page booklet) and pre-testing indicates that on average it may take approximately eight minutes to complete it.** The font is based on RNIB recommendations of font type (sans serif) and size (12 pt.)[57].

5.3.3 Questionnaire administration

The administration of these surveys has been guided by an established method (the Tailored Design Method)[58] which aims to create respondent trust, create reciprocity and overall tries to reduce survey error. Dillman (1991[59]) states that, "The theoretical framework used in this approach posits that questionnaire recipients are most likely to respond if they expect that the perceived benefits of doing so will outweigh the perceived costs of responding" (p.233). The perceived benefits are drawn from careful design and administration, including an incentive (book of stamps) along with the questionnaire, careful design of the survey that makes it easy for a participant to respond, and administration features which include a pre-notice letter that alerts participants' to the fact that they will soon be receiving a survey.

The method consists of multiple points of contact with the recipient, which for the purposes of the pilot study have been designed and timed as such[60]:

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

[55] E.g. The question: "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" has been used in at least 9 national surveys in the UK (Sturgis & Smith 2010) and many international surveys.

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

[57] Hill, N., et al. (2007). Customer Satisfaction: The customer experience through customer's eyes. London, Cogent Publishing.

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

[59] Dillman, D. A. (1991). "The Design and Administration of Mail Surveys." Annual Review of Sociology **17**: 225-249.

[60] The original TDM consists of 5 steps: 1) pre-notice letter; 2) questionnaire with incentive; 3) another questionnaire to those who have not responded; 4) a follow-up reminder / thank you postcard; 5) another questionnaire sent by recorded delivery. Steps 3 and 5 were omitted here, in order not to irritate the participants. The TDM is designed to simply get returns from questionnaires, where the questionnaire is usually the actual study. However, in our case, the questionnaire is simply one small part of a much larger study, and we deemed it necessary to be sensitive to participants needs by not overwhelming them with post and not irritating them, which was evident amongst some participants previously (McMichael 2011).

Point of contact	Stage	Explanation
1st	Pre-notice letter	A pre-notice letter was sent to inform the recipient that they will soon be receiving a questionnaire. The pre-notice letter was sent once the participants signed up.
2nd	Questionnaire	The self-completion questionnaire was sent, along with a cover letter and an advance 'thank you' of a book of first class stamps. These were sent approximately one week after the pre-notice letter.
3rd	Follow-up postcard	A follow-up reminder postcard, which reminded to the participants to complete the questionnaire, or to get in touch for another copy if the original was misplaced or not received, was sent one week after the 2nd point of contact.
4th	CFO reminder	The CFO team reminded the participant in person or over the phone of the questionnaire, asking if they need a replacement or help completing it, if the participant has not yet returned it.

Table 8: Summary of energy social capital survey distribution

For the participant, the process will be experienced as follows:

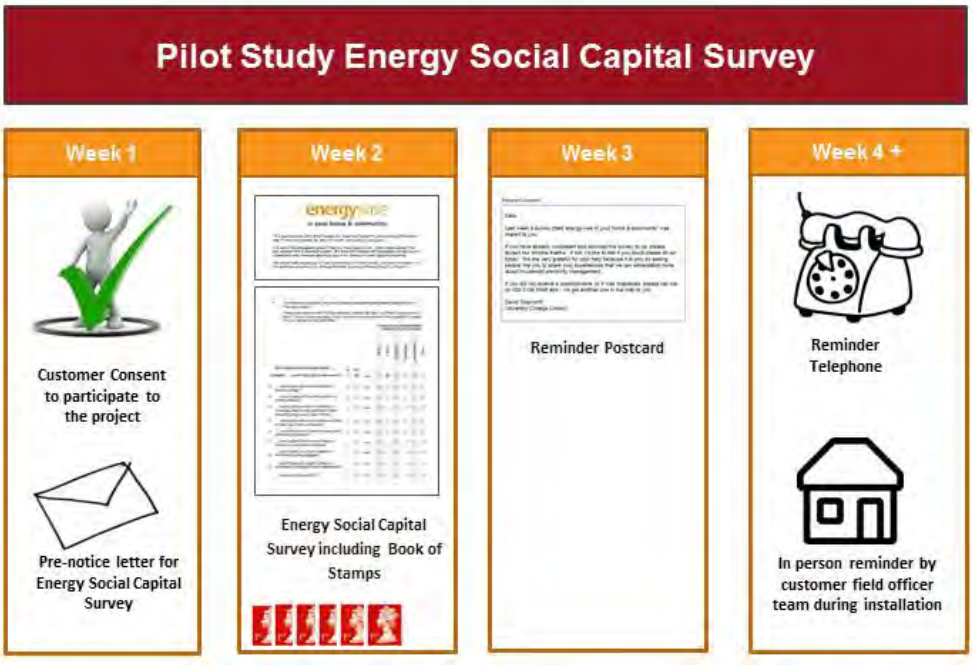


Figure 8: Participant experience with energy social capital survey

Response rate

The total response rate up to 22 May 2015 for social capital questionnaires was 73%. This is based on 15 questionnaires being sent, and 11 being returned (table 8). The research design protocol has been followed for the remaining questionnaires. These households have received reminder post cards and follow up calls. Therefore we can assume a final response rate of at least 73%.

	Possible Responses	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes - returned and (at least partially) completed	11	73.3	73.3	73.3
	No - did not return or returned uncompleted	4	26.7	26.7	100
	Total	15	100	100	

Table 9: Returned Energy Social Capital Questionnaires

5.4 Findings

One objective of the pilot study was to assess the survey administrative methods. To this end the pilot has been successful and the methods developed for administration of the energy social capital survey have been shown to be sound. At date of writing, the response rate of 73%, given the timing of survey administration vis-a vis participant sign-up is encouraging and is in line with expectations from the modified Tailored Design Method deployed.

With only 11 surveys received and analysed to date, findings must be regarded as being anecdotal. With such small numbers, subsequent findings may show very different trends. Currently, the findings from the surveys broadly indicate some level of information seeking about energy and a fair amount of 'energy social capital'. That is seven out of the 11 respondents knew people in their social networks to whom they would turn for energy related advice, and three respondents (23% of the pilot population) had had a conversation in the last six months related to electricity. Trust varied through the sampled population, with a slight majority trusting people over not trusting people.

The findings thus far suggest that electricity usage and energy related issues are not a specific or overwhelming concern for this group, but most have social resources they can turn to if there is an issue they'd like to discuss. To this extent the findings are broadly in line with those from other communities, but returns to date are too small to allow for meaningful analysis or interpretation; the project will continue to administer, collect and analyses surveys returned.

5.4.1 Trust

When it comes to trust, 55% (6) of the respondents indicated that they trusted people in their area, with 13% (2) respondents trusting local people "A lot". 27% (3) said they did not trust people in their area very much or at all, and 18% (2) said they didn't know (table 4 below). When asked if 'most people can be trusted' only one respondent felt this was the case, 46% (5) responded with 'depends', and 46% (5) responded that they felt one 'can't be too careful'. To this extent the findings are broadly in line with those from other communities, but returns to date are too small to allow for meaningful analysis or interpretation; the project will continue to administer, collect and analyses surveys returned.

Survey Returned	Possible responses	Frequency	Percent	Valid Percent (the % of responses marked on the surveys returned)	Cumulative Percent
Valid – Survey was returned	A lot	2	13.3	18.2	18.2
	A fair amount	4	26.7	36.4	54.5
	Not very much	2	13.3	18.2	72.7
	Not at all	1	6.7	9.1	81.8
	Don't know	2	13.3	18.2	100
	Total	11	73.3	100	
Missing – Survey was not returned	System - Survey not returned in survey administration process	4	26.7		
Total		15	100		

Table 10: Responses to the question 'How much do you trust people in your local area?'

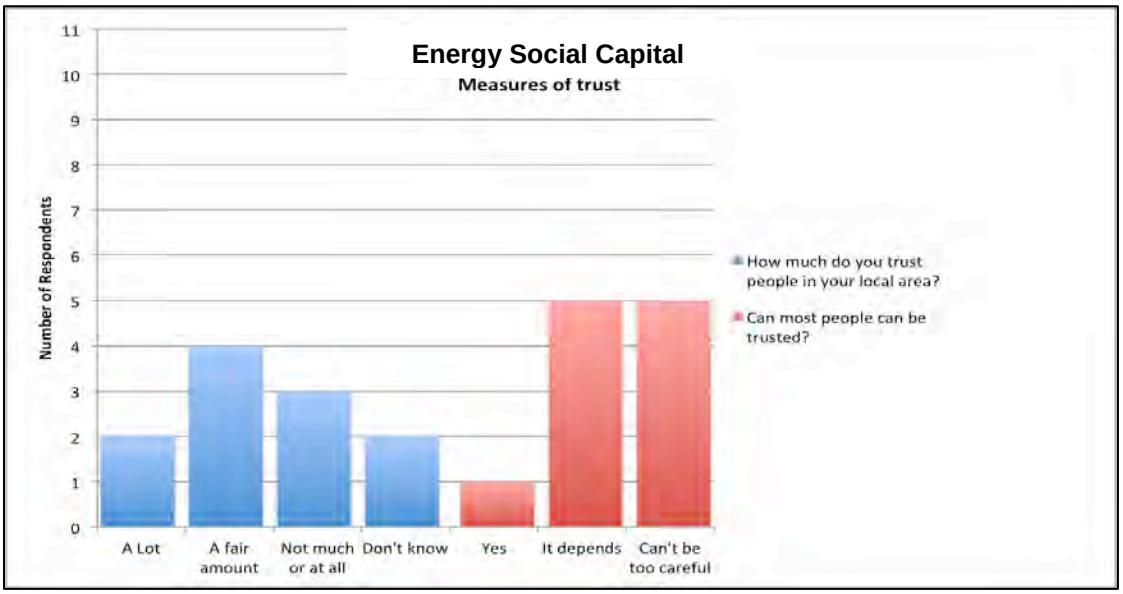


Figure 9 Energy Social Capital - Measures of Trust

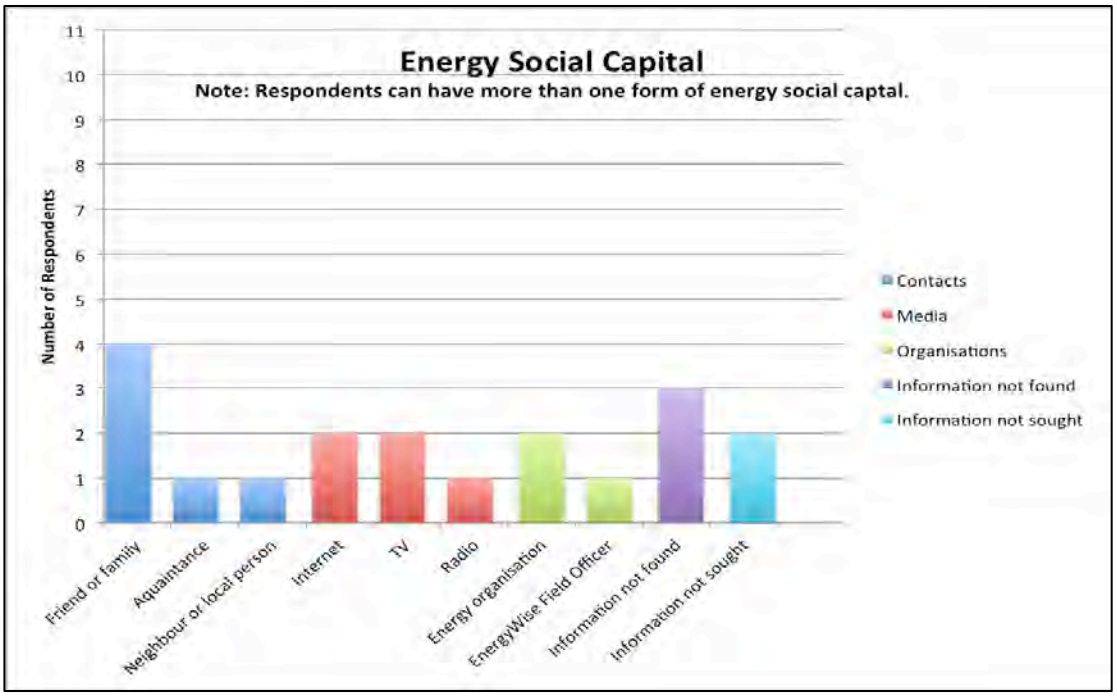


Figure 10 Forms of Energy Social Capital

5.4.2 Finding information

There were several questions which addressed where people look to, or find, information on energy efficiency or household energy use. This addresses 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. Previous research has linked this type of research with higher instances of adoption of energy efficiency devices[61, 62]).

When people asked to think about a time when the respondent had a question about lowering electricity use, there was a spread between contacting individuals, using the media and asking organisations. The following answers indicate the used of contacts and individuals: 36% (4) had asked someone they knew well, 9% (1) had asked someone they didn't know well, 9% (1) had asked someone from their local area. In terms of media, 18% (2) used the internet, 18% (2) used the TV, and 9% (1) had used the radio. In terms of organisations; 18% (2) had asked their energy supplier or other organisation and 9% (1) had used the Field Officer. However 27% (3) households had not found information and 18% (2) had not looked. Each participant can select multiple options to constitute their answer and Figure 10 below aims to demonstrate the variation of responses received.

When looking within, rather than across responses, there are additional and sometimes contradictory findings. **One of the two respondents who had said they did not look for information, also checked the CFOs as a source they'd used, suggesting that they would not seek information were they not involved in the project.** Of the five households who had contacted people to ask about electricity reduction, one had not found any information, while two had also used the media, and two had also used organisations such as their energy supplier.

When asked what would be the first thing they would do if they had a question on electricity in their home, 46% (5) said they would ask someone they know, 46% (5) said they would check media sources. 9% (1) said they would approach an organisation or group (Table 11).

	Possible responses	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Ask someone I know	5	33.3	45.5	45.5
	Check media sources	5	33.3	45.5	90.9
	Approach an organisation or group	1	6.7	9.1	100.0
	Total	11	73.3	100.0	
Missing	System	4	26.7		
Total		15	100.0		

Table 11: Responses to the questions 'In future, if you had a question about electricity use in your home, what would be the first thing you'd do to get information?

When asked how respondents would usually find information, 36% (4) said they find it by chance, while 27% (3) didn't get tips or advice either by searching or by chance. Some did seek for information, 9% (1) searched for it, while another 18% (2) combined both searching and chance (Table 12).

	Possible responses	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I look for it	1	6.7	9.1	9.1
	I find it by chance	4	26.7	36.4	45.5
	A bit of both	2	13.3	18.2	63.6
	I don't get tips or advice, one way or another	3	20.0	27.3	90.9

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

[62] 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.

	Don't know	1	6.7	9.1	100.0
	Total	11	73.3	100.0	
Missing	System	4	26.7		
Total		15	100.0		

Table 12: Responses to the question 'Do you usually look for information or advice on energy efficiency or find tips by chance?

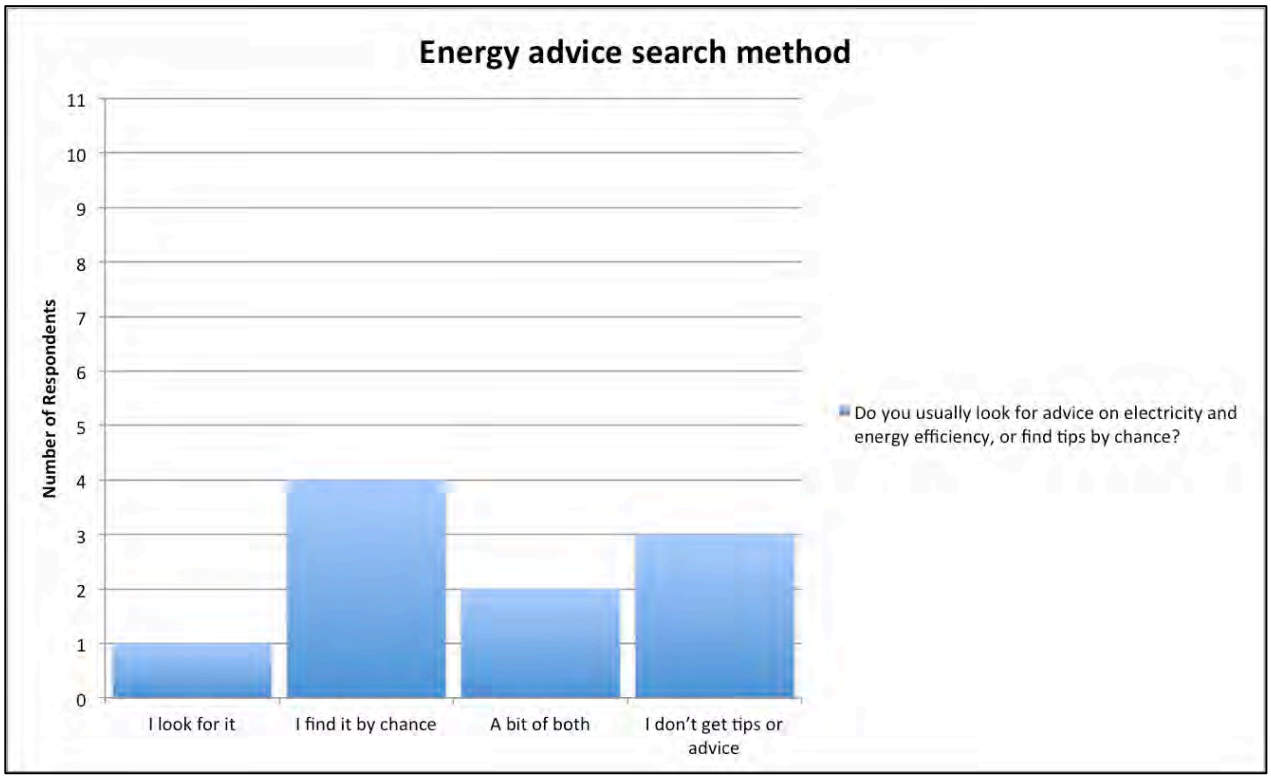


Figure 11 Energy advice search method

When asked if they knew anyone who could give specific energy efficiency tips or advice, 40% (7) did know someone amongst their social networks to whom they'd turn, although **it's important to note that one respondent counted the CFO as that person, and said they would ask them about smart meters**. The other respondents had a broader range of people in their networks to turn to. One had a friend who was an electrician, and a workmate who knows a lot about DIY, while another had friends, family and neighbours that could give sound advice on energy, advice on buying appliances and how to save energy. Conversely 30% (4) did not know anyone amongst friends, family, neighbours, work colleagues or acquaintances whom they'd ask. When asked to identify specific people and discussions had about electricity, 27% (3) of respondents had actually spoken to someone in the past six months to discuss matters of electricity or savings, and of these 18% (2) had spoken to between 4 and 7 people.

6.0 Focus group findings

6.1 Introduction

A focus group is a form of qualitative research in which a group of people are asked about their perceptions, opinions, beliefs and attitudes towards a product, service, concept, advertisement, idea or packaging. Questions

are asked in an interactive group setting where participants are free to talk with other group members. The discussions within a focus group are a good way to explore in detail the experiences and opinions of people of a similar background, and these are more likely to be revealed via the social gathering and the interaction which being in a focus group entails[63].

A focus group works best with a group of between six to 12 participants. A facilitator or moderator leads the discussion with the aim of drawing out contributions from all participants to ensure as many different voices or contributions are heard. Focus groups also usually include a second, non-participating member whose role is to take notes.

6.2 Purpose of the focus group

A focus group was held on 27 June 2014 with the objective of helping to ensure that the planned communication materials and methods were as effective as possible. Focus group participants were asked to provide comment and feedback on the project name, brand, and recruitment materials (invitation letter and accompanying project leaflet plus the welcome pack). In terms of the branding, two options were presented to participants, one featuring an owl and one featuring characters referred to as 'little things'.

6.3 Description

Focus group participants were selected on the basis that they were similar to trial participants, i.e. tenants of Poplar HARCA or Tower Hamlets Homes, with the intention of having a mix of participants broadly representative of the diversity of the area. One difference from trial participants was that those attending the focus group would not necessarily be British Gas customers; we did not know who the participants' gas/electricity suppliers were when we invited them. Only tenants who would not be able to participate in the trial (e.g. because their block was scheduled to have energy efficiency improvements) were invited, in order not to reduce the number of potential participants in the project.

15 households were invited and 13 indicated that they could attend the focus group but in fact only eight attended on the day. Participants were not asked their age or ethnicity, but the facilitators'' observations on the demographic are as follows:

- Five persons appeared to be white British; two men and three women, ranging in age from 40s to 50s;
- Three persons were non-white who all appeared to be of Asian descent; two Muslim women (one in her early 20s, another in her 40s) and one man in his early 20s.

Tenants were offered the choice of a hamper or a £30 voucher as a thank you for taking part. **Eventually, all participants opted for the £30 voucher.**

6.4 Structure

The structure of the focus group was based on a small number of open questions. The questions were designed to gather views from participants on the draft recruitment materials and on the proposed recruitment methods. The facilitator asked general questions, such as:

- Preferred method of contact by their social landlord
- The participant's feedback on the invitation letter and leaflet
- Preferred means of obtaining information about the project
- Feedback on accessing project information through the internet

[63] Morgan D and Kreuger R (1993) Successful Focus Groups, Advancing the State of the Art

As an outcome of the focus group, a report was written summarising these discussions and making recommendations regarding changes to the recruitment process and materials.

6.5 Findings

6.5.1 Trusted sources of information

Participants were asked to think about who, if anyone, they would go to or trust for energy efficiency advice.

Key learning point 1: Responses were mixed. Most seemed unsure of where to go for energy efficiency advice and opinions were divided on whether they would trust their supplier. These findings are broadly in line with the variety of responses observed to date on the Energy Social Capital questionnaire although the small numbers of returns to date do not allow conclusions to be drawn.

Detailed findings:
Out of the eight participants:

- One said simply that they wouldn't know where to go.
- Two mentioned using the internet (one of these said they wouldn't know where on the internet to look).
- Two said that they would trust their energy supplier information.
- Two said they wouldn't trust their supplier. One of these said they would trust friends and family.
- One mentioned that they would get involved if there was something going on locally. However, that participant gave the example of putting her name down for something run by the council, but never hearing back from them.

Outcome: Since participants' views varied in terms of which of the project partner they would trust, all partner logos will be used on the communication materials.

6.5.2 Method of communication

Participants were invited to think about the different ways in which they are contacted by their social housing provider (letter, telephone, text, email, door-knocking, etc.) and what is the best method for them.

Key learning point 2: Methods and preferences regarding contact by their social housing provider vary.

Detailed findings
Of the eight participants, four people mentioned being contacted by post; four mentioned being contacted by phone; four by email; and one participant mentioned being contacted by text.

Participants expressed a mixture of preferences of methods of communication. Of the eight participants:

- Two preferred emails (one younger male, one older male). In contrast to this, the younger female indicated that her father specifically would not do well with emails (he would request her help if he did).
- There was no clear preference between receiving things by post or by hand delivery; one participant indicated having something delivered by hand makes whatever is delivered seem more important, while another man indicated that if something is hand delivered, it probably means it's something that should have been delivered a while ago, i.e. it's overdue.
- Several focus group participants only had mobile phones (no landline) and calling a 0800 number from their mobile would be more expensive than calling a landline number.

Outcomes:

- Given that participants have different preferences for how they are contacted, participants on the project will be asked, at the point of sign up, how they prefer to be contacted (e.g. by post, phone (mobile or landline), email or text). The project will aim to send project communications in line with participant preferences as far as is possible.
- On all materials, a landline (020) number has been included as well as a 0800 number.

6.5.3 Project branding

Key learning point 3: Views were very mixed on the branding. In particular, different ethnic groups may respond very differently to brands that contain particular animals.

Figure 12 The two brands tested at the focus group

Detailed findings:
The two brands are shown in Figure 12.

- 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 participants. Given the ethnic diversity of the trial area, it has been 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'.

Outcome:
All character-based branding was removed. The project name '**energy**wise' and slogan 'be **energy**wise' was retained. Along with the message, 'Little things to help you save energy'

6.5.4 Invitation letter and leaflet

Key learning point 4: It was suggested that the letter should be redrafted to make it shorter and clearer. The practise has been followed by the project team and a clearer letter has been used as part of the pilot study. Obtaining feedback from the pilot participants on the communication materials, the participants said that they were of the right size and contain appropriate information.

Detailed findings:
Participants suggested that

- UK Power Networks should be introduced up front with an explanation of who they are, what they do and why they are doing this project.
- It is made very clear what will happen in the project: how many appointments there will be, how long they will they take and what participants need to do. As part of this, the letter should be specific about

the vouchers: 'further vouchers' is too vague and participants were not convinced they would actually get them. After consideration, it was decided that it was not possible to be specific about the total value of vouchers that participants could get as there be many different options for this depending on the level of activity by each participant.
- The font used should be clear and easy to read whilst also looking professional.
- The letter makes it clear that the 'device' will not increase bills.
- Recruitment materials should be very clear about what the project involves (smart meter, devices) and should explain that, once people sign up, they will be allocated to one of two groups; both groups will get the same equipment but one group will get it later than the other.

Outcome:
- All materials were amended to provide a clearer explanation about what the project involves (smart meter, devices) plus an explanation that, once people sign up, they will be allocated to one of two groups; both groups will get the same equipment but one group will get it later than the other.
- Information was included on UK Power Networks core business and project role.
- The role of a smart meter as part of the trial was made explicit.

6.5.5 Welcome pack and process

Key learning point 5:
The key feedback on the welcome pack and the installation process suggested that the project should:
- Ensure that engineers and CFOs offer a punctual and reliable appointments service.
- Make it clear that participants are not obliged to use the energy efficiency devices provided.
- Clarify that CFOs can come to people's homes to provide help and support when needed.
- Ensure that the installations happen within a maximum of one month after signup.

Outcome
These points relate to how the project is run rather than the recruitment materials. In order to minimise dropout rates, the project will be designed to minimise disruption or delays for participants. This includes ensuring that engineering and CFOs follow the scheduled appointments and that installations happen with a maximum of one month after signup.

6.5.6 Website

Key learning point 6:
A project website will need to be created, but focus group participants suggested that communication by phone or face to face will be more important as a first port of call for those wishing to find out more about the project.

Outcome
A project website has been created in line with the updated communication materials.

7.0 Pilot recruitment outcomes

7.1. Process for recruiting customers

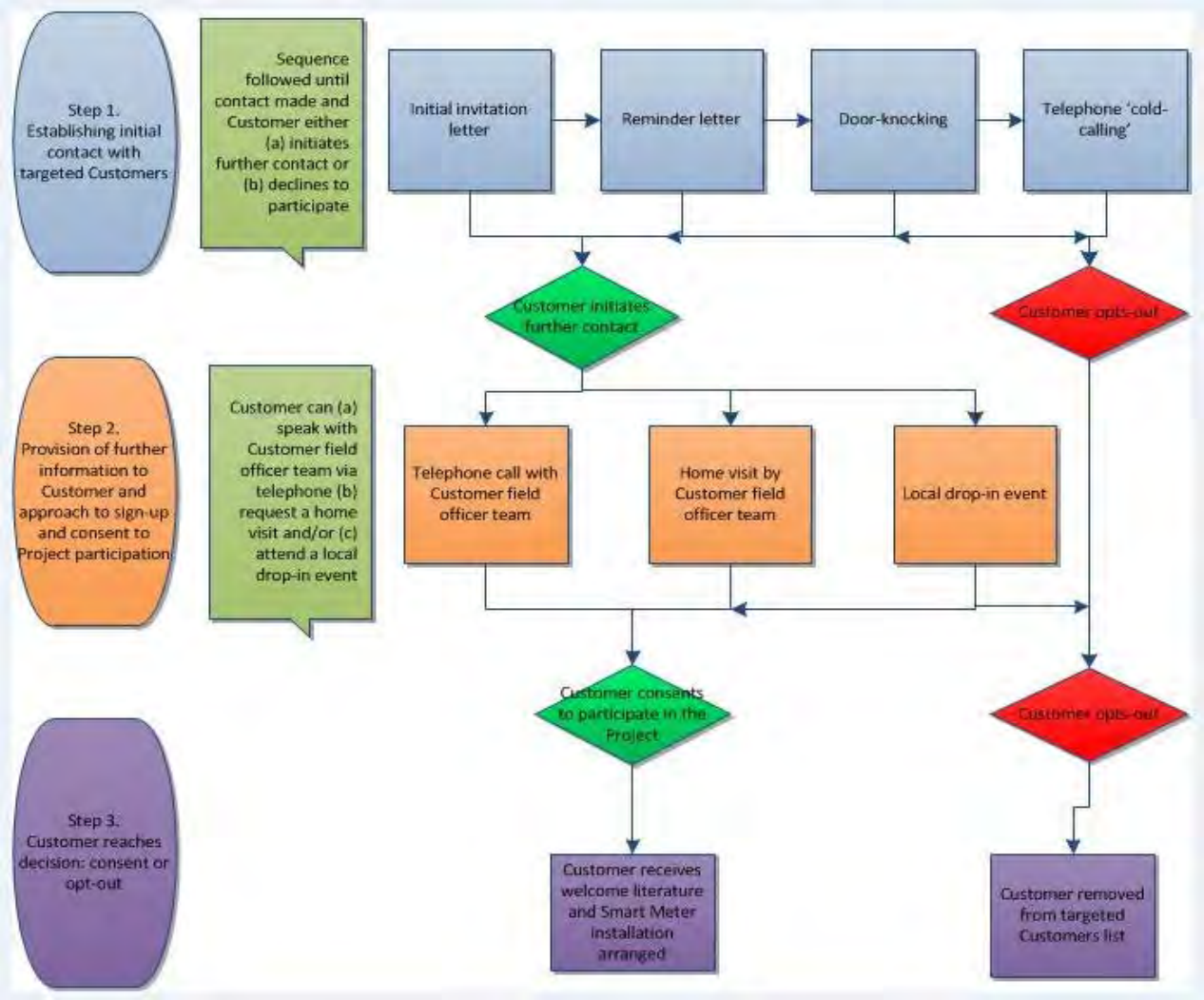


Figure 13 - Recruitment process

Figure 13 provides an overview of the different methods that will be employed to recruit participants to the trial. Full details are provided in the Communications Plan[64]; the key steps are summarised here.

Figure 14 Hand addressed envelope

The first material that a potential participant received was a letter introducing the project and inviting them to take part, along with the project leaflet which contained key information about the project. The letter was hand addressed, with the salutation also hand written, to increase the chances of it being read The letter and leaflet clearly state the benefits of taking part and invite the recipient to call the CFO team to find out more about the trial and sign up.

A reminder letter along with the project flyer was sent subsequently to customers that have not responded to the initial letter.

[64] UK Power Networks (2014) Vulnerable Customers and Energy Efficiency Communications Plan for Pilot Study and Project Trials - http://innovation.ukpowernetworks.co.uk/innovation/en/Projects/tier-2-projects/Vulnerable-Customers-and-Energy-Efficiency/

The CFO team manned a dedicated project telephone number. Customers calling this number could ask questions to find out more about the project. Customers can also arrange to have a home visit at a time that is convenient to them.

Figure 15 Customer Field Officer taking a call from a customer

Customers who did not sign up or made contact with the team after receipt of the invitation or the reminder letter had been targeted for door knocking activity and phone calls. Initially, the CFO team had undertaken door knocking activity. Each door knock at the same customer occurred at different times/days to maximise the chance of the customer being in. At these visits, participants my sign up there and then, or they may book a home visit, or book to attend a local drop-in event. Those participants who do not respond after three door knocks were targeted for call phoning activity. Again, these customers may sign up over the phone, or book a home visit or book to attend a drop in event.

Figure 16 Door-knocking

A local drop in event held to enable targeted customers to find out about the project. It was identified that no customer booked in advance to attend the drop in event and no customer attended the drop in event on the day. This outcome has been quite insightful and resulted in an alternative strategy to be implemented for trial 1.

7.1 Evaluation of the pilot recruitment

One of the aims of the pilot study was to test the response rate of the participants to the recruitment strategy. There were 36 participants approached within the pilot, and the intention was to recruit as many as possible and to see if efforts would lead to a minimum of 33% (i.e. 12) agreeing to join the project. In addition, the purpose of the evaluation was to understand what worked well and what didn't work well in terms of recruiting participants to the energywise pilot, so that the recruitment materials and process can be improved, where necessary, for the main project in order to increase the participation rate.

15 people were recruited in the pilot study of the project, representing a recruitment rate of 42%. Given the small sample size of the pilot, the figure of 15 participants is not statistically significantly different from the target recruitment rate of 33% when inference is made from the pilot sample size to the full trial sample size. This means that the pilot study has confirmed the probable full-trial recruitment rate of 1:3.

7.1.1 Evaluation methodology

The means which have been utilised in order to obtain feedback from the signed up customers are set out below:

- **Qualitative feedback from consented customers:**
  - Interviews over the phone with customers who have signed up to the pilot study of the project.
- **Quantitative and qualitative information from the recruitment database:**
  - The CFO team has maintained a recruitment tracker with all 36 approached customers. The tracker has mapped the customer journey for each approached customer along with other quantitative and qualitative information that are used in order to provide insights on the customer recruitment.

- The CFO team collected qualitative information through their interaction with the approached customers and this information was captured in the recruitment database and in a form that the field officers were filling, mapping the key points of their interaction with the approached customers.

- **Qualitative feedback from the CFO team:**
  - A workshop with the CFO team has been held in order to obtain feedback and qualitative information from the CFO team regarding their experience and success of recruitment.
  - Individual interviews with each member of the CFO team were undertaken in order to collect feedback on the recruitment process and identify items that worked or did not work well and need improvement.
- **External view of recruitment activity:**
  - Shadowing activity of the CFO team by a project partner during the door knocking activity, which added an external perspective to the evaluation of the pilot study.
- **Qualitative information from non-recruited customers:**
  - Non-participation survey which has been administered by the CFO team to approached customers who expressed that they did not want to participate in the project.

7.1.2 Recruitment Success Rate

The below conclusions are drawn from the 36 households that were approached as part of the pilot study of the project.

Although the approached customers could continue engaging with the CFOs in order to participate in the project, until the 24 of April 2015 which is considered as the end of the recruitment phase of the pilot study of the project, 15 households signed up to participate in the project. **This figure represents a recruitment success rate of 42%, which is above the targeted rate (1:3, 33%, 12 customers).**

In the full bid submission the project outlined that in order to ensure the robustness of the research, and minimise self-selection bias, British Gas customers who fitted the project eligibility criteria would be identified and a sample of 1,100 drawn. Recruitment would then target those 1,100 households. The sample of 1,100 assumed a recruitment success rate of 50% (response rate of 1:2 i.e. 2 participants will be contacted and 1 will respond positively) thus giving the sample size of 550. Post bid award and within the period for the trial design, the project explored the response that would be achievable, acknowledging that a 1:2 response rate was ambitious. The project took the decision to increase the number of the eligible participant population from 1,100 households to 1,650, allowing for a response rate of 1:3. The project has tested and explored the response rate of 1:3 through the pilot study and will continue if doing so for the main recruitment phase of the trials.

The outcomes on customer recruitment from the pilot study are positive (42% success rate) on the engagement of the fuel poor population with a project consortium led by a DNO and is related to energy efficiency and demand side response

7.1.3 Recruitment Customer Journey

This section elaborates on the items related to the effectiveness of the customer journey and clarifies which of the implemented recruitment steps has resulted in the greater number of sign ups and thus is promising to be the most effective mean for engaging fuel poor individuals in energy efficiency and demand side response initiatives.

Invitation and Reminder Letters

Approaching customers through letters is an option to be considered for future campaigns. The impact of the letters in terms of generated sign ups is not directly comparable to the impact of the door knocking activity (2 customers against 9), but it may have financial benefits, as it removes the need of the CFO team to visit the

customer premises for door knocking. In addition, the letters introduce the project to the approached customers and therefore prepare the way for the door knocking activity.

It is recommended that letters are sent to approached customers as the first communication mean in order to prepare the way for the door knocking activity and prompt customers to sign up without requiring great amount of effort from the CFO team, as opposed to the door knocking activity.

The reduction in the effort of the CFO Team will be attributed to the reduction of travelling time required by the field officer team, time in the field, and reduction of exposure to health and safety risks that are present in the field.

Door knocking activity

Figure 17 demonstrates the number of households recruited within each recruitment step undertaken as part of the pilot study. **As it can be seen, the most effective mean of recruiting customers into the project was**

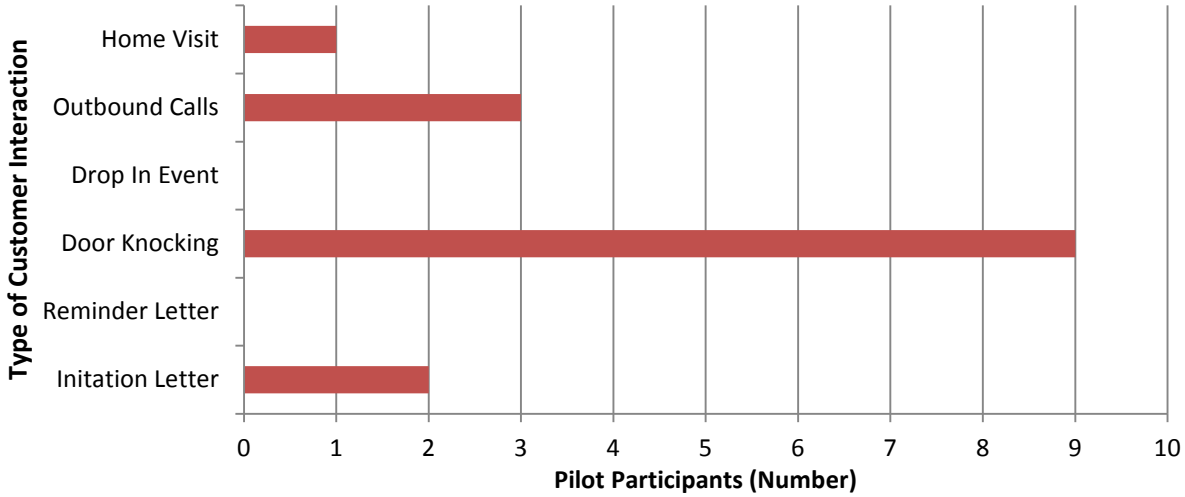


Figure 17 Number of Consents per Recruitment Step

the door knocking activity, where the CFOs were visiting the customers' premises without notifying them beforehand, in order to advertise the project and ask the customers if they would like to sign up. Considering the success of the door knocking activity within the pilot study of the project, the work shift of the CFO team of trial 1 has been realigned in order to maximise the time of the team on field recruiting customers.

It is worth noting the fact that the reminder letter has resulted in zero households signing up. This can be explained by the fact that the door knocking activity commenced on the day that the reminder letter has been received by the customers and thus any effect that the reminder letter had is embedded within the results of the door knocking activity. Looking however the impact of the invitation letter (two customers signed up), it can be assumed that the reminder letter has a similar effect, as the difference between the communication materials provided to the customers are marginal.

The key learning outcome from the customer journey is the fact that in future commercial campaigns in relation to energy efficiency and demand side response, the implementation of door knocking activity is a key item in order to increase the uptake of the commercial propositions by the customers.

Drop In Event

It is worth noting the fact that the drop in event generated zero sign ups of the approached customers. The reason behind this observation was the fact that no invited customer attended the drop in event. The drop in event was advertised within the reminder letter and through interactions in person between CFO and the customers, during the door knocking activity. The CFO team suggested that the drop in event was advertised too early in the recruitment process, was not advertised as highly as it could be and provided recommendations for improvement, which will be tested within the trial 1 of the project.

- The drop in event has been scheduled after the second week of the recruitment campaign, with the door knocking activity running only for one week. The CFO team has suggested scheduling the event after the first round of the door knocking activity (i.e. all customers to have been approached at least once within the door knocking activity). The rationale is that the approached customers will be more familiar and confident with the project and the CFO team after personal interaction that characterises the door knocking activity and thus is more likely for them to attend the drop in event.

- The advertisement of the drop in event was skewed by all other project information included within the reminder letter, and as a result it did not stand out from the letter. The project is mitigating this feedback provided by the CFO team by designing a separate leaflet for the drop in event. Within the leaflet, it will be also clear the fact that although the session will run for the entire date, the customers are invited to attend for 15 min (which is the average duration of the presentation provided by the CFO team) in order to obtain necessary information and potentially sign up.

The effectiveness of the drop in event(s), after improved marketing of it, will be further tested within trial 1 of the project. Drop in events are good opportunities for the companies to increase their sign up rates, by reducing the effort of the CFO team (compared to the door knocking activity), as it provides the possibility of multiple sign ups within the same location and thus minimising the travelling time and exposure of the CFO team to health and safety risks.

Outbound Phone Calling Activity

It had been envisaged that the outbound phone calling activity would take place only after three attempts to reach the customer via door knocking are failing, unless asked by the customer to call them. Within the pilot study of the project, three customers signed up via outbound phone calling activity and in all cases this call has been requested by the customer. As it was expected, customers are requesting the CFO team to call them back at times that they are not busy (i.e. not having the appropriate time for the sign up, or being busy for the CFO team).

The project will test whether the outbound call activity without customers' consent generates sign ups within the trial 1 of the project. It is expected that an opportunity may be created due to the fact that a number of resources within the CFO team will be based at the office in order to progress with back office items and answer customer questions, and therefore there may be scope in these resources undertaking the outbound call activity.

Website

The impact of the website has been included within the results obtained from the invitation and reminder letters. The reason for such integration is the fact that the letters were the prompters to the website and through the website the approached customers could only express interest and ask the CFO team to contact them. However, the project recognises the fact that the website may be a significant source for attraction of interest. As part of the pilot study of the project, only one customer approached the CFO team through the website. Eventually, this customer signed up to the project, but required multiple additional interactions (outbound call, outbound email, door knocking, etc.).

The benefits of implementing a website for advertising the commercial proposition are similar to these of the letters. The website can prepare the way for the door knocking activity, which is the most effective means of recruiting, and also support the trust building exercise with the CFO team. This is because information on the project is in the public domain including the photos and names of the CFO team, generating the impression of a legitimate exercise with commitments that will be met. Figure 18 demonstrates the number of visits to the project website during the pilot study. In total, 73 visits have occurred within the duration of the pilot study.

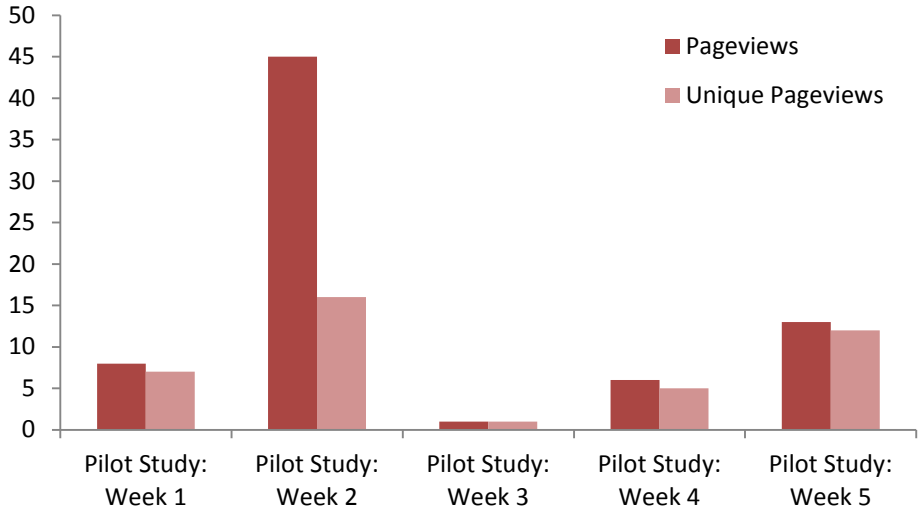


Figure 18 Pageviews and Unique Pageviews during pilot study

The number of Unique Pageviews demonstrates the number of customers (41) that have visited the project website over the five week monitoring period, while the number of Pageviews demonstrates the number of visits that occurred at the project website over the same period (73). Although the number of Unique visitors (41) is greater than the number of approached customers for the pilot study (36), the level of monitoring applied cannot provide indication as to which proportion of the invited customers (36) had actually visited the website.

7.1.4 Customer Interactions

The project has also monitored the number of interactions of the CFO team with the approached customers and Figure 19 presents the number of interactions occurred prior to the customer providing their consent in participating to the project. This information can be a useful indicator of the effort required by the CFO team in order to establish a successful communication with the customer and obtain customer's consent.

It is worth noting also the fact that the project considers as an interaction the effort made by the CFO team in

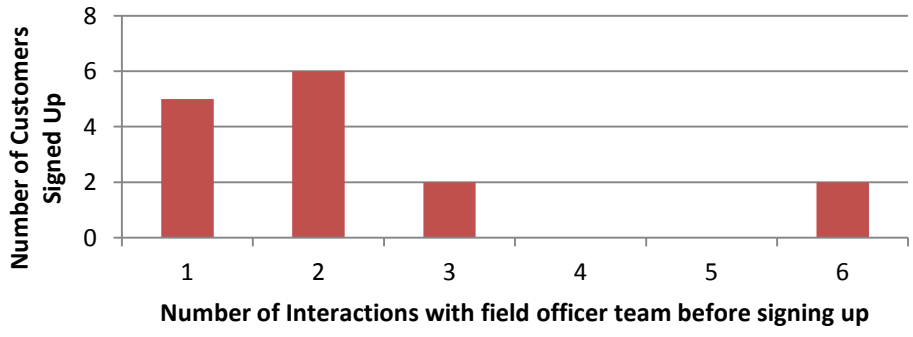


Figure 19 Number of interactions before consent

approaching the customer through door knocking activity and resulted in the CFO leaving a 'sorry we missed you card'. The rationale for including the unsuccessful interaction as an actual interaction is because the CFO team is providing effort in establishing the communication channel with the customer and although unsuccessful it should be taken into consideration when planning future engagement campaigns.

As it can be seen by the previous Figure 19, the majority of customers recruited in the project (11 out of 15, 73.3%) consented in participating in the project after one or two interactions with the CFO team. Such fact demonstrates the fact that both the CFO team and the communication materials of the project have successfully provided the key messages and benefits to the customers in order for them to decide to take part in the project.

For the two customers who have had 6 interactions with the CFO team, their customer journey involved multiple phone calls or door knockings which resulted in re-scheduled appointments or 'sorry we missed you' cards because the customers were not available. It is believed that the unavailability of customers could be partially mitigated if the visits of the door knocking activity are planned based on areas and thus any time 'lost' in approaching customers not willing to engage with the team could be counterbalanced from the time gained by approaching another customer in the same building or neighbour.

7.1.5 Customers Motivation

The project approached all 15 consented customers, and was able to receive feedback from 10 of them. The remaining five customers have been approached multiple times but no communication was established.

One of the key learnings was related to the reasons why the customers have agreed to participate in the project. Figure 20 demonstrates the responses received (more than the number of customers, as some had more than one reason appealing to them out of the project proposal).

It can be seen that the prospect of saving money due to lower energy bills over the longer term was the greatest driver for the participants to sign up. Another apparent learning is the fact that the customers have clearly understood the benefits of the energy efficiency and demand side response activities, which are related to long term engagement and cost saving.

Feedback also from the CFO team and one customer suggested that the customers are feeling comfortable knowing that their social landlord is involved to the project and it is believed that partnering with a social landlord for energy efficiency and demand side response activities will be beneficial for engagement with the fuel poor customer group. It is also worth adding the fact that the social landlords have the contact details of the targeted customer pool and such fact could complement their value to the DNOs.

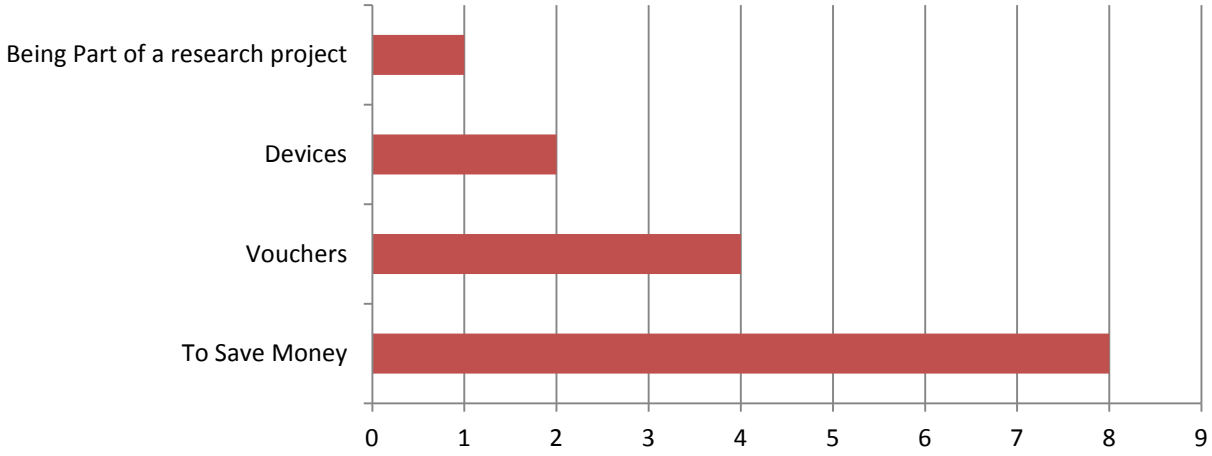


Figure 20 Motivation/ Reasons for Participation

7.1.6 Lessons Learnt on Recruitment

Best Time for Door Knocking Activity
Based on feedback from the CFO team and review of the day and time of sign ups, it was realised that the door knocking activity which was proven to be the most successful means of recruiting customers was **most successful on Saturday afternoon, followed by 12:00 – 14:00 and early afternoons during the weekdays**.

When the project consortium asked the CFO team in regards to the best hours of door knocking the following response has been given. "The best hour really depends on the customer, and whether they work or not. But for door knocking, we've found the best times were between 12 and 2pm (not too early, and avoid the school runs), and early evening. And you should try to avoid holiday times, such as Easter or Christmas."

Role of the CFO Team

> ***"The field officer was lovely, if they hadn't knocked on the door, I probably wouldn't have signed up. They were the deal maker."***
>
> Customer Feedback

The CFO team is a key element of the success of the recruitment campaign as it represents the 'face' of the project. The CFO team should be chosen in line with the demographic of the targeted customer group in order for the customers to feel familiar when engaging with the team. The familiarity of the team with the customers could consist of similar cultural characteristics, ethnicity backgrounds or sharing of knowledge of the local area and people.

As reported by the CFO manager, the fact that all team members speak non-English languages, which are also spoken by the targeted customers, and the fact that the CFO team know the local area and culture of the residents well, have significantly assisted in building a relationship of trust and confidence with the targeted customer pool. Feedback from the customers demonstrates that they responded quite positively to the CFO team and the use of non-English language was helpful in communicating successfully with the customers (some customers quotes are provided in the boxes):

> ***"The field officer was polite, made me feel comfortable and made the project very clear"***
>
> Customer Feedback

Considering the significant achievement of the CFO team in recruiting approached customers to the project and the customer feedback, **it is consider beneficial for DNOs to develop partnerships with organisations which employ local people in order to fulfil the duties of the CFO team.**

In addition, most approached customers seemed to be comfortable with a female field officer. Diversity in the CFO team in terms of age and gender is recommended for the CFO team, and it is **recommended that diverse teams are developed for customer recruitment and customer engagement activities**.

The project has adopted certain safety principles in order to minimise any safety risks that the CFO team is exposed to. The safety protocol instructs that two CFOs are undertaking door knocking activity if it is after 16:00 or if it is known that the approached customer has had violent history. Within the pilot study the safety protocol has been found to be working correctly as no violent incidents have occurred, but the CFO team has realised that some customers were not comfortable in opening their door to two unknown people.

Setting Up of the CFO Team
The CFO team recruited for the project comprises of a field officer manager, two field officers and a field officer assistant.

The CFO manager has several years of strategic management experience and a good understanding of local people, demographics and community work. As part of a board of directors for a local housing association, he also brings extensive knowledge of the housing associations. His main role with the pilot study was to organise the team in the recruitment activities, reflecting the project requirements, while also undertaking recruitment activities activity himself.

The CFO assistant brings key skills to the team such as technical knowledge of the energy and IT industry. In addition, the CFO assistant is passionate and skilled in IT, database handling and research methodologies to analyse, create and scrutinise IT requirements for the project and the team. His main involvement within the pilot study was to maintain the recruitment database, organise and manage the work rota, while undertaking recruitment activities.

One CFO has a law degree with a sociological background and has work experience with local clientele and specialises in customer relations and research. The second CFO has a background in sociology, safeguarding, client communication and recruitment and has previously worked for local charities, Her experience in customer service, has developed her ability to understand local demographics and key customer relationships. The main role of the CFOs within the pilot study of the project was to undertake customer recruitment activities, primarily through door knocking.

As it can be seen the mix of individuals making up the CFO team is quite diverse and comprises of communication capabilities to IT skills. From the pilot study of the project, it has been proved that the following key skills are required (among other) in order for the field officer team to successfully meet its objectives:

- **Communication and influencing skills,** in order to engage effectively with the customers
- **Sociology and psychology skills** in order for the team to be able to understand successfully the messages provided by the customers and reach accordingly and thus ensure that the engagement with the customer is undertaken in a controlled manner.
- **Experience of the local demographics and local culture,** in order to understand the targeted customer group and engage effectively with the customers
- **IT skills and experience with data privacy aspects,** given the extend of data flows and IT related items involved in similar initiatives, the CFO team needs to encompass competence in handling data items in a manner that does not compromise the compliance with data protection act.
- **Management experience from the CFO manager**, considering the diversity of the team and the various methods employed for recruiting and engaging with customers, it is of paramount importance for the team to be led by an experienced manager with insight on motivational aspects of the team, as well as careful organisation of the team in order to maximise efficiency and ensure the success of the campaign.

Training of the CFO Team

An induction programme was designed for the team which began with sessions getting to know the different partners involved in the project. It also included a comprehensive programme of training to enable the team to understand the project and to carry out their roles. This included training from:

- NEA in energy awareness, fuel poverty, vulnerability and health;
- Suzy Lamplugh in personal safety;
- NatCen on social research skills and data privacy;
- CAG Consultants on the recruitment protocols, recruitment role play and facilitation techniques;
- British Gas on smart meters; and
- UK Power Networks and British Gas on the customer journey.

Following the induction, the team carried out various team building and role play exercises and have been involved researching the demographic profile for potential participants. This vital stage of training in preparation for the project had created a great deal of deeper knowledge, understanding and growth towards the project aims, objectives and requirements.

Considering the fact that the recruitment campaign has resulted in 42% response rate which was higher than the target of 33% and the fact that no customer complaints have been received to date, it is believed that the training of the CFO team have supported them in communicating with the customers effectively. Feedback from the CFO team suggested that the received training and interaction with project partners prepared them adequately for the interaction with the customers.

“One of the most useful courses was that smart meter awareness training from British Gas. Some customers have misconceptions of what a smart meter is, so it’s great to be able to clearly explain the benefits to them. And the NatCen training about body language and posture has been invaluable in interacting effectively with customers on the doorstep.” (*Feedback from CFO*)

“We had training from Suzy Lamplugh, and we’ve put in place safety protocols that we all use. For example, we have a safety application on our phones into which we put the expected time of an appointment. The office can use this application to keep track of where the CFOs are, and if an appointment goes over the expected time, the office is automatically alerted, along with the team member’s current location. We also check in and check out from any home visit, and we don’t work alone on evening visits. There hasn’t been a situation yet where we’ve had to act on any of this, but it’s very reassuring to know that the systems are all in place.” (*Feedback from CFO*)

The CFO team also valued the role-play sessions they undertook as part of their preparation for the customer recruitment, as it provided them with a good opportunity to practise the handling of different type of customers and reflect on project objectives and key messages. The CFO team recommends to any team which would like to undertake customer interaction to practise role play sessions as they increase the confidence of the involved persons in interacting with the customer. Furthermore, it is recommended that some shadowing activity of more experienced CFOs should be included in future recruitment campaigns as it will help the customer field officer team in increasing their confidence and learnt useful tips from more experienced professionals.

The key learning point is that a thorough learning schedule should be followed by CFO teams employed in similar initiatives. It is recommended that the training schedule will consist of the following:

- **Training on particular technologies and fields** in order for the team to be able to respond competently to customer questions. If the team could also test the technology themselves (i.e. at their homes) in order to become familiar with its functionality and potential problems that they may arise, it would be even better.
- **Training on research methods** in order to be able to comprehend fully the objectives of the project or any other initiative and realise that the impact of their actions would be beneficial or detrimental to the success of the campaign they have engaged with.
- **Training on communication and facilitation skills** in order to develop intelligent communication means and utilise them effectively in the customer interaction. It should be noted that an important element of the training should be focusing on **body language** which is of paramount importance to the door knocking activity.
- **Training on safety protocols and safety culture** in order for the team to develop and implement systems and processes and minimise their exposure to safety risks.
- **Role play session and shadowing activity** of experienced field officers in order for the team to increase their confidence in customer interaction and understand better the objectives of the initiative.
- **Training and practise with the recruitment protocols** of the initiative which will be followed within all customer interaction. The recruitment protocols need to reflect the communications plan and expand on

greater level of detail (i.e. develop scripts for certain occasions, list of Frequently Asked Questions, etc.).

- **Training on data privacy aspects and Data Protection Act (DPA)**. Given the number of data handling and data exchange flows included within similar activities, it is recommended that the CFO team or an appointed representative receives training on data privacy aspects in order to be able to control any data handling aspects that may contradict with the compliance with the DPA.

Tips on Customer Interaction

As was expected, not all customers respond to the same communication method and a customised approach in customer recruitment needed to be followed by the CFO team in order to be successful. The key recommendations of the team in order to be successful with the customer interaction are summarised below:

- Be enthusiastic and confident about the project.
- Learn to read the customers' body language quickly and effectively, and change your approach accordingly in order to ensure a successful communication with the customer. If you can see the customer is busy or uncomfortable, don't push them, and instead arrange to call or a home visit at another time.
- The approach will also vary with gender, ethnic background or age, but the key messages remain the same.
- Before approaching a door, undertake a mental rehearsal of what needs to be said. Make sure notes are to hand, and that the customer's name is known.
- Know all the project materials really well; be very familiar with the project and the answers to any likely questions. Do not be caught off guard by a customer.
- A key item is to let the customers know about all the great partners involved, particularly their housing provider and the Bromley by Bow Centre.
- If feel uncomfortable, withdraw from the situation. Trust gut instinct every time.
- Younger people generally want less detail and more opportunity to ask questions. With older people, you usually have to take them through the project materials in more detail and then give them the opportunity for questions.

Recruitment Campaign Operational items

As part of the pilot study of the project, the CFO team obtained substantial experience in the front end and back office processes and systems required in order to implement a successful customer recruitment campaign. The key lessons learnt, as reported by the CFO team, are shown below:

- **The work rota:** The CFO team found it difficult to organise the rota so that there was sufficient cover in case of sickness or annual leave. The modified recruitment strategy for trial 1 (recruitment in groups) is believed to be supportive to the CFO team on managing their work rota, due to the fact that the number of customers that need to be approached in a certain time intervals is reduced and more easily manageable. It is recommended that in future customer recruitment campaigns, the total number of targeted customers is organised in smaller bunches taking into account operational requirements as well as the available resource from the field officer team.
- **Travelling time:** Since properties in the pilot were geographically dispersed, the CFOs on occasion travelled for 45 minutes to get to one property. Finding addresses and bus routes was also found to be quite difficult. The increased travelling time is explained through the low number of households approached in the pilot study and the fact that they were dispersed in the trial area. For the main trials, the recruitment strategy of recruiting in batches is organised against Low Super Output Areas (LSOA) and effectively properties within a batch are grouped in closer geographical areas. Such strategy is believed to resolve the matter of high travelling time. Moreover the CFO team are now more familiar with travelling routes that will aid them in their travel planning for recruitment activity moving forward. Another element required in order to mitigate the travelling time is related to preparation of the systems ahead of the door knocking. Identifying particular applications with bus or train routes and also

undertaking a recognition activity in the area is believed to make the travelling at the properties more efficient.

- **Some properties have door phone entry systems.** In these properties it is not possible to leave a 'sorry I missed you' card and the household will not know that they have been approached by the CFO team during the door knocking activity. The CFO team have been asked to identify the number of households with phone entry systems, and for them to consider visiting these buildings at times that is more common for people to be at home (i.e. Saturdays). Another possible mitigation that could be implemented in future campaigns is engaging with the social landlord in identifying which properties have a phone entry system and which don't. With such early engagement the CFO team will be able to organise the door knocking activity more efficiently.

7.1.7 Lessons Learnt on Installation

Although the report is focusing on customer recruitment, it has been considered beneficial to include lessons learnt gathered from the project in relation to the installations that were performed in the pilot participants. From the 15 consented customers, 8 have been allocated to the intervention group and 7 to the control group.

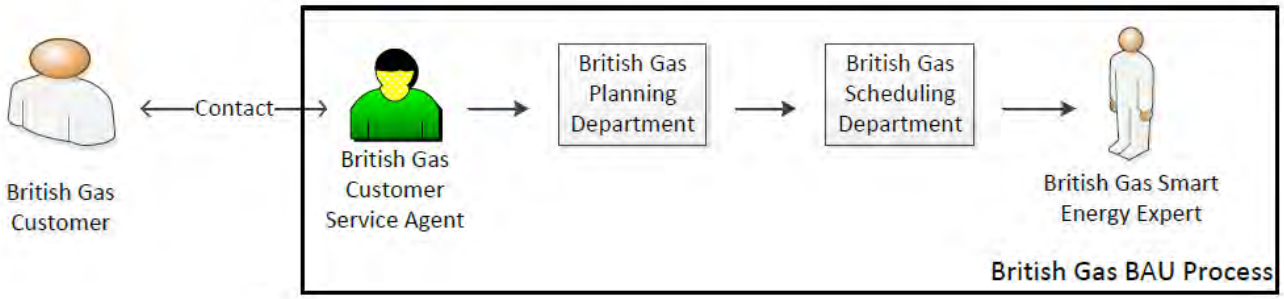


Figure 21 Energy Supplier BAU Systems for Scheduling of Installation

Appointment Scheduling

British Gas has their own BAU systems in order to book appointments for smart meter installations and involves customer interaction and exchange of information between departments. As part of the project, an alternative appointment booking model has been developed where the CFO team undertook the role of the appointment manager and customer interface and then passed this information to British Gas, which confirmed the appointment with the customer. Figure 21 and Figure 22 demonstrate the high level architecture of the BAU systems used by British Gas and the change that is the introduced as part of the project.

As part of the British Gas BAU process of an energy supplier, the customer either registers their interest in a smart meter upgrade online or is contacted by British Gas. A Customer Service Agent will then confirm the appointment with the customer and initiates the information exchange between internal departments. The smart meter eligible customers' information is passed to the Planning department which plans for the job and then passes this information to the Scheduling department which undertakes the detailed in-day scheduling of the job. Once the in-day scheduling is completed, the job is confirmed at the handheld unit of the British Gas Smart Energy Expert who has been tasked to complete the smart meter installation.

The internal part of British Gas scheduling systems remain the same for the project. The part that differs is the initial customer interaction and the appointment scheduling which is now undertaken by the CFO team. Ahead of the customer recruitment campaign, British Gas and the CFO team have agreed on the installation model to be followed, which consists of two weeks' notice to British Gas ahead of them mobilising for installing equipment at the targeted consented customer. Once a customer is recruited, the CFO team will arrange the appointment

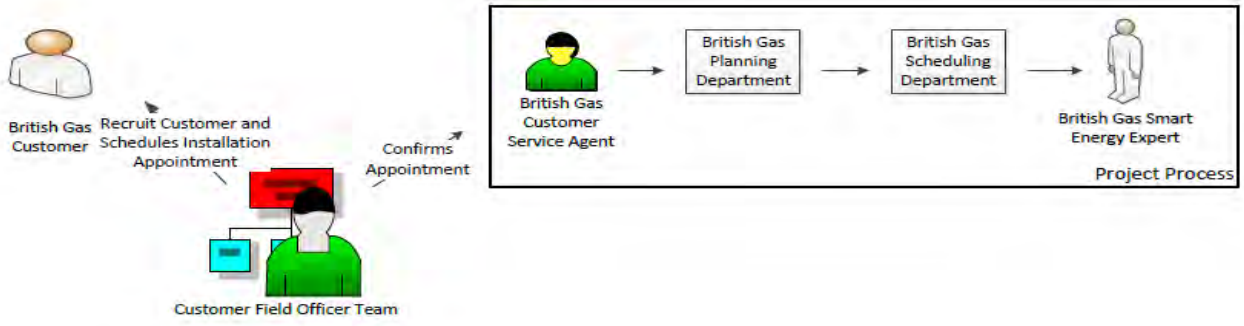


Figure 22 Project process for scheduling installation appointments

for the installation and then pass this information to the British Gas project team who pass the information to the British Gas Customer Service Agent in order to coordinate the internal British Gas departments and the external parties that will attend the installation (i.e. Passiv systems Ltd, the data logger and temperature logger contractor).

The tested approach is named as targeted area-led installation approach, where effectively all targeted customers are co-located and is different to the BAU process followed by British Gas, where they could be installing consecutive smart meters at customers located on different areas. The tested approach has logistical benefits which may result in increased cost efficiency 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.

Another potential benefit is related to the fact that the CFO team can target certain time intervals (i.e. weeks) in order to maximise/concentrate 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.

The approach detailed above (i.e. targeted area-led installations via trusted third parties) may 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. This benefit could not be fully validated as part of the pilot study as the number of approached and consented customers was lower than the maximum number of installations that could be implemented in any one week.

Appointment booking process

A lesson learnt in this area was that the random allocation of participants allocated to either group of the project may slow the installation booking process (administered by the CFO team and British Gas) as a third party, University College London, need to disclose if participants are in the intervention or control group, and therefore which type of installation they have to receive.

The CFO team can only arrange an installation appointment, once they have received the allocation information from UCL (to which group the targeted customer is allocated). This may affect the effectiveness of CFO team and the customer journey as it adds one extra point of contact with the signed-up participants. However, the delay has been estimated to be simply an overall shift of one or two days due to the lag between sign-up and the call to book installation, therefore not affecting the installation schedule significantly. Removing the two day lag by moving the group allocation disclosure key from UCL to the CFO team will affect instead the robustness of the research design and may compromise the accuracy of the random allocation process.

Data Exchange and Data Quality

Considering the fact that all the organisations involved in the recruitment and installation campaign of the project were dealing with datasets of moderate size and complexity, but have not cooperated in the implementation of

any other similar campaign in the past, issues related to data have been raised. The common issue was the absence of all relevant fields when communicating data forms or dashboards. Further to missing important information, some issues have been raised in relation to data quality. The project team identified the need for corrective action early in the pilot study and as a result daily calls between the CFO team and British Gas and weekly calls between British Gas and Passiv Systems are now running. The aim of these calls were to prompt early identification and resolution of issues as soon as they arise. This communication method proved to be successful and it was adopted in the trial 1 of the project.

Installation

The installations undertaken as part of the project are characterised by multiple parties attending the customer's premises. In case of the intervention group there are three different organisations attending the installation (British Gas, Passiv systems, CFO team of Bromley by Bow Centre) and in case of the control group that are two different organisations (Passiv Systems and CFO team). As this working model is new to all three organisations, a workshop held on 5 June 2015 with the three parties asked for feedback on the working method. All parties agreed that the installation model can work successfully, but they require further coordination in order to manage the customer expectations properly. All parties stressed the importance of having the Appointments Manager in place and British Gas provided both an interim solution and now have a longer term solution that would support the project objectives.

In addition, the CFOs reported that the participants have the Smart Energy Experts particularly helpful and that they have appreciated the fact that one is local and a well-known face in the area. This observed feedback is aligned with the observation of the recruitment campaign where strong preference to engage with local people is shown.

Energy Efficiency Devices

The energy saving devices selected by the project team (one eco kettle, three LED light bulbs and one standby shutdown) have been provided to participants in intervention group by the CFO team during the installation visits and a series of learnings have been captured.

No customer complaints on the devices provided have been received to date. However, customer feedback has indicated that some participants, particularly elderly people, may have difficulties in operating the devices and they may conclude that the devices are not working. Even though instructions from the manufacturer are provided with the eco kettle and the standby shutdown and simple tips are included in the energy efficiency advice leaflet given by the project together with the devices, some customers have requested the CFO's support to operate the eco-kettle and to replace the light bulbs. Whereas an extra visit has been arranged to show how to use the eco kettle, neither the CFOs nor the housing provider could support with light bulb replacement.

Feedback has also shown that customers may request devices with different specifications to serve their needs, such as a standby shutdown with longer cord. Following the captured feedback, the CFOs have been advised to inform participants on how to best operate the devices they have received when their request cannot be accommodated. Early insights from trial 1 installation have indicated that some households may not have television; therefore the standby saver might not serve all trial participants.

Light Bulb Fittings

Another key learning that the project wanted to capture from the Pilot Study was around the most common fitting for light bulbs participants have in their homes. This information will allow the project to place the future orders for the LED lights in an informed and more targeted way. Feedbacks from the first installation visits indicated that bayonet (B22) is the most common fitting among trial participants, with six households out of the seven requesting all three LED bulbs with B22 caps versus only one participant requesting the three bulbs with Edison screw (E27) caps.

Energy Efficiency Advice

During the smart meter installation visit, in addition to the energy efficiency advice leaflet, the project provided to all intervention group participants advice on the energy efficiency devices they have received along with further facts and tips on how to manage electricity consumption in the household. In addition, the British Gas' Smart Energy Expert demonstrated the energy tips included in the Smart Energy Display as part of British Gas' business as usual process. No additional energy efficiency advice (neither proactively nor reactively) has been provided by the Smart Energy Expert outside the BAU protocol for the smart meter installation appointments to date. The energy efficiency advice leaflet has been found very insightful; however some participants found the pictures of additional devices (specifically shower monitor, timer and eco balls) confusing as they thought they would have received them as part of the energy efficiency kit provided by the project.

7.1.8 Lessons Learnt on Home Survey

During the first installation visits the CFO team has collected insights on the Home Survey developed by UCL to collect socio-demographic details that are critical to understand the target population as well as details of electrical items in the home. The Home Survey has been administered to six participants (in intervention group) with three surveys completed during the installation visit. As the other three participants were too busy at the installation time, they have requested the CFO to arrange a separate appointment to conduct the survey rather than complete it themselves. No survey has been conducted with participants of the control group to date, due to the fact that CFOs were unable to attend the control group installations and as a consequence the CFOs will arrange extra visits with participants in control group in order to complete the survey. Moving forward into trial 1 installations, the CFO team will attend the installations at both groups, as per the defined customer journey, which will be managed centrally by the British Gas Appointments Manager.

Home Survey Duration

Preliminary testing conducted by the CFO team with their own acquaintances has suggested that the completion of the whole survey could take up to one and a half hours. It has been also indicated that the inclusion of pictures was very helpful, but that certain questions could have been more easily understood if there was an example of the type of appliance or a definition beside it. For the three surveys conducted to date with pilot participants, it took from half an hour to one hour to complete them, showing that the administration of the survey with real customers can take slightly shorter compared to the preliminary testing conducted by the customer field officer team with their relatives and friends.

Engagement of Customers

The administration of the Home Surveys during the installations has indicated that customers were willing to engage with the CFO once they have been explained the benefits of completing the surveys (i.e. gaining a wider understanding on energy use patterns in different households). It has been observed that the support offered by the CFO team was a key element for the survey's completion, with the CFO reading the questionnaire for the customers and providing assistance on the identification of appliances.

Appliances

Most of the appliance models have been captured as out of reach. The CFO's feedback have also indicated that participants found difficult to understand the different types of water heating appliances and what a dehumidifier is, despite the CFO's explanation. Early insights from installation appointments with both pilot study and main trial participants have shown that the language skills of the CFO team have been helpful to improve participant's understanding of the questionnaire with the CFO translating part of it and explaining in Bengali what the different appliances are. The CFO team has also reported that many of the appliances owned by the participants are old, but manufacturer and model numbers could not be captured as they are not visible anymore.

Home Survey Principle
Participants felt the need to explain themselves in regards to the question on income, but they have been reassured that it was not necessary and that all information collected will be kept anonymous. Learning from the experience of the first installations resulted in revisiting the protocol for the Home Survey administration including the opportunity for an extra visit to be arranged only for the cases that the participants refuse to being left with the survey for self-completion, which remains the preferred option if the survey cannot be conducted during the installation visit.

7.1.9 Non Participation Survey

Purpose
Non-participation literature is relatively absent, particularly in the field of energy efficiency. Summerfield et al (2007[65]) conducted a very small energy efficiency study in Milton Keynes that involved monitoring electricity and gas consumption in 29 homes over an 18-month period (from 1989-1990). A follow-up survey was sent to those same households 15 years later (in 2005), and 15 of the same participants took place, 8 could not be identified, and 6 gave reasons for non-participation that included: "'lack of availability due to work commitments', 'being away during the start of the study period', 'moving to another home', and 'illness'" (p.784). DECC (2014[66]) also found that community energy efficiency outreach programs suffered from non-participation due to eligibility issues, lack of interest, hassle-factors, lack of trust in projects and schemes and "'customer-led' journey steps (e.g. providing numbers for householders to call to refer themselves to a scheme)" (p.7).

Content and administration
In order to understand why potential participants might not be joining the project, a 'non-participation survey' was conducted. Given the lack of evidence for reasons for which might be anticipated for non-participation, and due to the method used by McDonald & Oates (2003[67]) which yielded a 43% response rate, the non-participation survey here will be a simple open-ended question which can then be analysed using, for example, content analysis, where categories emerge out of the answers:

Personal survey (face-to-face/over the phone):

- If no reason is given, the CFO asked the open-ended question: "In order to improve our project, can I please as ask your reason for choosing not to join energywise? Your answer is confidential and completely anonymous."

Written:

- Self-addressed stamped post-card (sent along with a very short cover letter) which simply states: "'My/our reasons for choosing not to join energywise are" and leaves space for their own answer (as per McDonald & Oates 2003[68]).

Response rates to non-participation survey
During the pilot study recruitment, the non-participation survey was conducted with six people who explicitly said that they do not want to take part in the study. For the rest of the people who did not join the project, a survey

[65] Summerfield, A. J., et al. (2007). "Milton Keynes Energy Park revisited: Changes in internal temperatures and energy usage." Energy and Buildings 39(7): 783-791.
[66] DECC (2014). Learnings from the DECC Community Energy Efficiency Outreach Programme. Department of Energy and Climate Change, London.
[67] McDonald, S. and C. Oates (2003). "Reasons for non-participation in a kerbside recycling scheme." Resources, Conservation and Recycling **39**(4): 369-385
[68] McDonald, S. and C. Oates (2003). "Reasons for non-participation in a kerbside recycling scheme." Resources, Conservation and Recycling **39**(4): 369-385

was not administered, as they never explicitly said that they do not want to take part. Therefore there was a 100% response to non-participation surveys for those who confirmed that they had decided not to participate in the project.

Findings and Reasons for Non Participation
The reasons for the non-participation of the six customers are given below:

- The customer preferred not to have changes happening in their house and considered the project being too much hassle.
- The customer's son explained that the approached customer had long term illnesses, was mainly in the hospital and is unable to take part in the project.
- The customer did not want to participate because their family members were not interested in the project and she decided not to take part.
- The customer's daughter considered the project being time consuming and told her mother (approached customer) not to take part as being unable to devote the required time, and the customer decided not to take part.
- The customer's son didn't seem enthusiastic about the project and therefore the customer decided to not take part at all and said that her son makes the decisions.
- The customer does not want to take part as she has a lot personal issues happening at home and they will last for quite a while.

As can be seen, half of the responses (50%) are related to the fact that the customers do not have the necessary time to devote to the project due to personal circumstances, being either related to a medical condition or other daily items. There are also responses related to the fact that the customers or their family were not interested and as such they decided not to participate (two customers, 33%). The fact that a proportion of customers are not interested in the project may be an indicator of future difficulties that DNOs will be facing when implementing energy efficiency and demand side response activities. Finally there is one response related to the fact that the customer does not want for changes to be happening at their homes, which was one of the anticipated reasons for non-participation, as people are generally reluctant to change.

Overall, it can be seen that the majority of the responses of the targeted customer group did not participate due to non-availability issues and this needs to be factored in future recruitment campaigns with this targeted customer group. In addition, it is evident that in many cases decisions over the homes are taken after obtaining feedback from the family and particularly in cases where the invited participant is an older person.

7.2 Qualitative evidence on the efficacy of different recruitment channels, strategies and materials

As explained earlier in the report, feedback on the recruitment channels, strategies and materials has been obtained through feedback calls with the signed up customers (10 out of 15), a workshop with the CFO team (13/04/15), shadowing activity of the CFOs during the drop-in-event and door knocking (07/04/15) and individual interviews with each CFO team member (27/04/15 – 28/04/15).

The feedback received by the customers on the communication materials was positive and as a general comment, the customers reported that the information included within the communication materials was clear, understandable and at the right length. The fact that customers signed up at the time they received the invitation letter demonstrates the fact that the communication materials of the project successfully communicated the project message to the customers and were effective. Some feedback however came through the customer interviews and the CFO team and the project team decided to update some elements of the materials in order to reflect the received feedback. The changes are not material and are shown below, along with a description of each communication material employed by the project.

- **Envelope of the invitation and reminder Letter:** The project team updated the envelope of the letters by adding the logos of the social housing landlords (Tower Hamlets Homes, Poplar HARCA) below the energywise logo. Feedback from the CFO team and one customer outlines

that a tenant is more likely to open an envelope coming from their landlord. **In order to increase the chances of an approached customer signing up at the time they receive the letter, the approach of advertising the fact that the social landlords are participating in the project has been implemented**.

- **"Sorry we missed you" cards:** The project team followed the same approach as in the envelope of the letters and advertised both the energywise logo and the social housing landlords (Tower Hamlets Homes and Poplar HARCA).

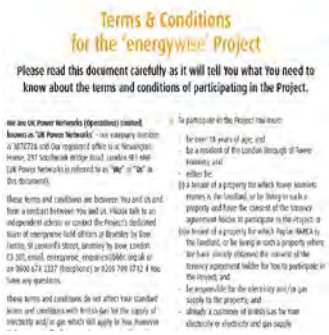
- **ID Badges:** Following the approach taken on the envelope of the letters and the sorry we missed you cards, the project team has added the logos of the social housing landlords (Tower Hamlets Homes and Poplar HARCA) to the CFOs ID Badges.

- **Reminder Letter:** Due to the fact that in the drop-in-event that was conducted as part of the pilot study, no invited participant attended, a revised strategy for the communication of the drop-in event will be taken. The project team updated the reminder letter in order not to mention the drop in event and is developing a separate invitation leaflet that will be sent separately to the reminder letter to the eligible customers, inviting them to participate in the drop-in event and making it clear that it can be a 15 minute drop-in not a full day event.

- **Project flyer:** No material changes have been made as no participant has yet provided corrective feedback on the flyer. To date customers have contacted the project with no customer contacting their social housing landlord, therefore advertising a dedicated team and project contact details directs all enquiries to them. This makes for interesting learning when looking at the projects replication model and what support systems would need to be in place.

- **Illustration Guide:** Photos and names of the additional recruiters that will be supporting the trial 1 recruitment will be added in the illustration guide, in order for the customers to become familiar with all persons that may approach them. It is also worth adding that the additional persons that will be involved in trial 1 are also included within the project's website, in order for the customers to become familiar with them and check their legitimacy as part of the project, which would boost their confidence in engaging with them.

- **Terms and Conditions:** The innovative characteristic of the terms and conditions is the fact that these terms are between the customer and UK Power Networks. This is similar to Low Carbon London's approach and different to how Customer Led Network Revolution undertook their terms and conditions, where the terms and conditions were between the customer and the energy supplier. UK Power Networks does not usually have such a contractual relationship with a residential customer under Business As Usual (BAU) operations. As a result the project will be able to provide valuable lessons learnt of the ownership of the contractual terms by the DNO.



A significant lesson learnt was related to the fact that the customers were confused that there was a seven day cooling off period once consented when at the same time the project provides them the opportunity to leave at any stage through notification. Therefore the seven day cooling off period was removed and the ability for a customer to leave the project at any point remains.

- **Key Facts:** The scope of the key facts is to highlight the key points of the terms and conditions to the customer. This is used by the CFO team members in order to sign up a customer to the project. Once a customer expresses that they would like to sign up to the project, the field officer will read them the key facts document. Within the document, there is a prompt instruction to the customers to read carefully the terms and conditions.

A lesson learnt was related to the fact that the customers do not usually have the time to listen to the document word by word and therefore providing the customer the key points and referring them to the terms and conditions is the best approach for customer recruitment.

- **Welcome Pack Folder**: The folder has been used in the random allocation of the approached householders in the control and intervention group of the project. The householder discovers which project group they are when opening up the Welcome Pack. The Welcome Pack folder includes the welcome pack brochure along with the 'thank you' voucher in the form of a £10 Love 2 Shop voucher. The whole package is sent to customers who have signed up.

During the pilot study, the Welcome Pack was posted approximately a week after they signed up to the project due to the 7 day cooling off period that the project offered in the pilot after consenting to sign-up. With the insight that the 7 day cooling off period is redundant, as we were already offering customers the opportunity to remove themselves from the project at any time, the project will now post out the Welcome Pack at the same time as the confirmation letter and terms & conditions.

- Welcome Pack brochure whose scope is to provide a detailed explanation to the customer about the project, it includes the technologies involved, the opportunities created for the customer (i.e. get involved in feedback panels and with your participation a 'thank you' of £30 will be provided) and what happens next. The brochure is included within the Welcome Pack folder. The difference between the welcome pack of each group (intervention and control for trial 1) is the customer journey, as both groups will receive the same technologies in the end, but the customer journey will be different; where they receive them at different times.

Further to the communication materials that have been used for the customer recruitment, the project has developed also educational materials related to energy efficiency and other topics, as shown below:

Energy Efficiency Advice Leaflet
Who will receive it: All participants as part of the suite of interventions provided by the project.
When: During the smart meter installation visit, when energy efficiency devices are provided to the household.
Scope: To provide advice on the energy efficiency devices that the householder has received from the project, along with further facts, tips and advice on how to manage electricity consumption in the household.

Consumer Services Charter
Who will receive it: Households approached who decline to participate; households withdrawing from the project; all participants when the project completes.
When: When a household declines to participate or leave the project; at the closedown of the project for participants.

Scope: To provide energy-related advice and signposting to an extensive range of external supporting schemes and programmes separate to the project that can be of interest for the households struggling with fuel bills both nationally and locally. The Priority Services Register is also advertised.

Updates: The 24 page Customer Services Charter developed in the previous reporting period has been revised with NEA's support in order to reduce the cost of the printed leaflet. A low cost leaflet is desirable in terms of potential scale of the number of participants that may receive it within the project's delivery and if proven a useful tool to have a leaflet that is low cost if the project were to be replicated. This process resulted in a six page leaflet that includes all key messages, energy-related advices and the most relevant local and national supporting schemes for the target population.

Cold Homes Leaflet

Who will receive it: All participants in the intervention group if low temperatures are recorded by the project through the installed temperature logger solution installed at participants' households. This forms part of one of the projects' customer protection mechanisms to ensure no participant is adversely affected through changing their behaviour and energy pattern; primarily when they are interacting with the projects' 'off peak' tariff.

When: If the project observes under-heating as result of a statistical comparison between intervention and control group.

Scope: To provide advice on how the household can stay warm and healthy. Also to make them aware of the health risks of under heating their home and signposting them to external advice and help centres. The Priority Services Register is also advertised.

Part of the pilot study of the project was also to capture lessons learnt in relation to customer interaction and the following updates have been in the strategy for trial 1 and are provided as recommendations for future customer engagement campaigns with this targeted customer group.

- **The CFO team to follow the customer's preferred method of contact**. Where email is indicated as preference, have an email issued and then the following day phone against the number given. The CFO team should not make assumptions on methods of communication and follow the method as defined by the customer, at the timeline defined by the customer.
- **Where the customer is highlighting that they will be in touch first, we may have to avoid any further door knocks (at the customer's request) in order to avoid coming across as a nuisance.** After three days from the day that the customer indicated that they will be in touch, the CFO team to give the customer a reminder call.
- **The CFO team to leave a "sorry we missed you card" and leaflet in case they see that the customer is busy and completely unable to talk**. If their expressions seem very pre occupied, leaving these resources will help them recognise that the CFO team is legitimate and provide them with the opportunity to have a look as soon as they are free in their own time. Similarly as with the previous bullet point, the approach should be customer oriented.
- **The CFO team to be patient while door knocking and wait for five minutes between knocking the door and leaving the property.** People may have responsibility such as feeding children or they may be elderly which may delay them in answering the door. Recognising the fact that all approached customers do have their personal life, and that the project or future campaign will come as a change, it is important to respect the customers preferences and obligations.
- **The CFO team to re-assure the customers straight away if any concerns raised that we are not in any way affiliated with any political party.** Political door-stepping was being undertaken as part of the elections. This lesson learnt is particularly important at cases where an election campaign is undergoing, as it was the case for the pilot study of the project. Reassurance of the customers that the CFO team is not affiliated with any political party is required in order to continue with the customer engagement. The same approach could be followed in other instances where another campaign is running along with the customer recruitment for the energy efficiency and demand side response initiatives.

- In case the customer expresses that they are not interested in the project, depending on their tone the CFO team to try to **outline some key points of the project such as it is not a sales call and there are many benefits of taking part**. Noted that this strategy will apply only if their tone does not sound intimidating.
- **A technique that is recommended is to suggest to a customer a home visit when speaking to them on the phone.** As face to face appointments are far more interactive, in cases that the customer sounds unwilling to engage over the phone, the CFO team to suggest a home visit. This lessons learnt is based on the fact that personal interaction through door knocking or home visit is more likely to result in the customer consenting to participate in the project.
- During the pilot study face to face reminders were conducted by the CFO team with pilot participants who had not returned the Energy Social Capital survey. This reminder process identified that two participants had not received the survey or had lost it. It is important to note that the survey is accompanied by a first class book of stamps as a 'thank you' for a participant completing the survey. Following this, the project has put in place a mechanism to **issue a replacement survey on a case by case basis and has included a 'return address if undelivered' to the pre-letter and survey envelopes.** This mechanism is believed to be able to maintain or even increase further the response to the Energy Social Capital Survey. The project did explore the option of posting the survey through recorded delivery but the postal charges for what it believed to be an infrequent occurrence were too substantial.

7.3 Customer support

The pilot study and the early stage of main trial recruitment and installations have indicated that the support the CFO team can offer to the customers is key to the effective operation of the project and to improve the customer journey. In several occasions the participants have proactively engaged with the CFO team requesting extra support on specific project items. For instance, some customers, especially the elderly people, have indicated they were experiencing difficulties with the operation of the energy efficiency devices and they have requested support to make the eco-kettle work and replace the light bulbs. Whereas the CFO could not be helpful with light replacement due to safety issues, an extra visit has been arranged to show how to operate the eco-kettle.

Additionally, having a local team that builds up rapport with customers is also important to collect customers' feedback on different topics and reply with advice and explanations whenever possible. This is fundamental to improve the customer journey by understanding the customers' needs and adjust the project's protocols accordingly if possible. Certainly the CFOs have been the aggregator of participants' queries, such as requests for devices with different specifications/different devices and clarifications on the additional devices shown in the energy efficiency advice leaflet.

In regards to survey administration, the support provided by the local team has been extremely valuable in order to ensure that the information required from the project (such as demographic information and household's appliance ownership) are captured effectively. In the administration of the Home Survey the CFO's role has been central in the successful completion of most of the surveys with the CFO reading the questionnaire for the customers, translating some items in Bengali, explaining the differences between appliance types and providing assistance on the identification of appliances around the house. The added value of deploying a local team is also demonstrated by the fact that several customers have initially requested for an extra visit to complete the survey with the field officer rather than being left alone with it. Additionally, one of the participants has also requested the CFO's support to complete the energy social capital questionnaire (even if designed for self-completion) showing that having a local team participants can refer to is not only a key element for customer recruitment and engagement but is also beneficial from a research point of view.

8.0 Lessons Learnt

The present section provides a summary of the key lessons learnt gathered through the recruitment activity for the pilot study of the project, the installation activity undertaken, the surveys administered to the pilot participants and the evaluations of the communication materials.

Lessons Learnt on Recruitment

#	Lesson Learnt
L1.1	**Response Rate on Customer Recruitment:** The outcomes on customer recruitment from the pilot study are positive (42% success rate) on the engagement of the fuel poor population with a project consortium led by a DNO and is related to energy efficiency and demand side response. This lessons learnt is positive for future campaigns of energy efficiency and demand side response, as it demonstrates the willingness of the fuel poor population to engage in these campaigns.
L1.2	**Effective Means of Recruitment:** It has been demonstrated that the most effective means of recruiting fuel poor households in the project was the door-knocking activity, which accounted for 60% of the total sign ups achieved in the pilot study. In future commercial campaigns, the implementation of door-knocking activity is a key activity in order to increase the uptake of the commercial propositions by the fuel poor customers.
L1.3	**Invitation and Reminder Letters:** Although the mailing of letters to the targeted customers did not generate as a high number of signed ups as the door knocking activity (13% compared to 60%), it is recommended that letters are sent to identified customers as the first communication mean in order to prepare the way for the door knocking activity and prompt customers to sign up without requiring great effort from the CFO team, as opposed to the door knocking activity.
L1.4	**Outbound Phone Calling Activity:** Within the pilot study the project couldn't test the effectiveness of the outbound phone call activity. In the three occasions that a customer signed up through an outbound call, this call had been requested from the customer and thus it was prearranged. The project will test this activity within trial 1, but is believed that there is scope of undertaking the outbound call activity due to the fact that back office resources will always be at the office to address customer inquiries.
L1.5	**Drop-In Event:** No customers attended the drop-in event during the pilot study recruitment. The key lesson learnt is related to the importance of accurate and careful advertising of the event. It is recommended that the drop in event is advertised after the first round of door knocking (in order for the customer to be familiar with the CFO team and the project) and be advertised through a separate leaflet (as opposed to be included within the reminder letter).
L1.6	**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 commercial campaigns.
L1.7	**Customer Interactions:** The majority of customers recruited in the project (73.3%) consented in participating in the project after one or two interactions with the CFO team. Such fact demonstrates the communication materials of the project have successfully provided the key messages and benefits to the customers and give rise to the importance of the CFO team in conveying the right messages to the customers.
L1.8	**Customer Motivation:** The prospect of saving cost due to lower energy bills over the longer term was the main driver for the participants to sign up. Another apparent learning is the fact that in order for the fuel poor customers to realise the opportunity for long term cost saving, the fuel poor customers were able to comprehend the energy efficiency and demand side response concepts, which is encouraging for future commercial campaigns.

#	Lesson Learnt
L1.9	**Best Time for Door Knocking Activity:** The door knocking activity was proven to be the most successful during Saturday afternoons, followed by 12:00 – 14:00 and early evenings during the weekdays.
L1.10	**Role of the CFO Team:** The CFO team should be chosen in line with the demographics of the targeted customer group (culture, ethnicity, background, local area, language, etc.) in order for the customers to feel familiar when engaging with the team and support the trust building activity that is required for effective engagement.
L1.11	**Language Barriers:** The fact that all CFOs speak non-English languages significantly supported the customer recruitment. Feedback from the customers demonstrates that they responded quite positively to the CFO team and the use of non-English language was helpful in communicating successfully with the customers, particularly as some customers did not speak English.
L1.12	**Female CFOs:** Despite religious/cultural sensitivities most approached customers seemed to be comfortable with a female field officer. It is recommended that diverse teams are developed for customer recruitment and customer engagement activities.
L1.13	**CFO Team Set Up:** In order for the CFO team to be effective, the following skills have been identified as required by the team members and the leadership of the team: • Communication and Influencing skills, • Sociology and psychology skills, • Experience with the local demographics and local culture, • IT Skills and experience with data privacy aspects, • Management experience from the CFO manager.
L1.14	**CFO team training:** The following training themes are recommended to be undertaken by teams undertaking commercial campaigns related to energy efficiency and demand side response: • Training on particular technologies and fields, • Training on research methods, • Training on communication and facilitation skills, • Training on safety protocols and safety culture, • Role play session and shadowing activity, • Training and practise with the recruitment protocols, and • Training on data privacy aspects and Data Protection Act (DPA).
L1.15	**Tips for effective customer engagement (by the field officer team):** As was expected, not all customers respond to the same communication method and a customised approach in customer recruitment needed to be followed. The key recommendations of the team in order to be successful with the customer interaction are summarised below: • The CFO team needs to be enthusiastic and confident about the project • The CFO team needs to read the customers' body language quickly and effectively. • The CFO team needs to vary their approach based on the approached customer. • The CFO team needs undertake a rehearsal of what needs to be said before communicating with the customer • The CFO team needs to let the customers know about all the partners involved, particularly their housing provider and the Bromley by Bow Centre. • If the CFO feels uncomfortable while engaging with the customer, they need to withdraw from the situation. • Younger people generally want less detail and more opportunity to ask questions. Older people usually require discussion over the project materials in more detail and then a questions and answers session.

#	Lesson Learnt
L1.16	**The work rota:** The CFO team found it difficult to organise the rota so that there was sufficient cover in case of sickness or annual leave. It is recommended that in future customer recruitment campaigns, the total number of targeted customers is organised in smaller bunches taking into account operational requirements as well as the available resource from the field officer team.
L1.17	**Travelling time:** Since properties have been dispersed during the pilot, the CFOs on occasion travelled for 45 minutes to get to one property. It is recommended that recognition activity prior to the actual door knocking and organisation of the target customer pool in smaller bunches will reduce the travelling time and increase operational efficiency.
L1.18	**Properties with Door Phone Entry Systems:** In has been observed that in these properties it is not possible to leave a 'sorry I missed you' card. The CFO team have identified the households with phone entry systems and consider visiting these buildings at times that is more common for people to be at home (i.e. Saturdays). Another possible mitigation that could be implemented in future campaigns is engaging with the social landlord in identifying which properties have a phone entry system and which don't.

Lessons Learnt on Installations

No	Lesson Learnt
L2.1	**Appointment Booking Journey:** 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.
L2.2	**Appointment Scheduling for Installation:** The adopted approach is named as area-led installation approach, where effectively all targeted customers are co-located 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. 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.
L2.3	**Appointment Scheduling for Installation:** 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.
L2.4	**Installation Customer Journey:** Furthermore, it has been observed that on certain occasions the defined installation customer journey had not been followed and this is attributed to the fact that multiple parties following different processes need to be coordinated successfully in order to manage carefully the customer expectations. It is recommended that an Appointments Manager is appointed as the central hub of the parties' coordination.

Lessons Learnt on Data Quality

No	Lesson Learnt
L3.1	**Data Quality Issues:** It has been observed that in cases where multiple organisations are involved in data exchange, issues with data integrity and quality will arise. It is recommended that frequent calls are established between the parties directly involved in the data exchange in order to resolve data items as soon as they emerge.

Lessons Learnt on Energy Efficiency Devices & Advices

No	Lesson Learnt
L4.1	**Operational difficulties by elderly people:** Some customers, particularly elderly people, may have difficulties in operating the devices, therefore missing the opportunity to unlock their energy saving potential.
L4.2	**Operational difficulties:** Even though instructions and simple tips on how to use the devices have been provided to participants, extra support from the CFO team may be required to show how to operate the devices correctly.
L4.3	**Customers' Preference:** Participants may request devices with different specifications. In such cases, the CFO team will inform participants on how to best operate the devices they have received when their request cannot be accommodated.
L4.4	**Light Bulb fitting:** 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.
L4.5	**Energy Efficiency Advice:** To date the energy efficiency advices provided by the project consisted solely in the energy efficiency advice leaflet and the energy tips included in the Smart Energy Display, as envisaged by the research design. No additional energy efficiency advice (neither proactively nor reactively) by the Smart Energy Expert was required.
L4.6	**Energy Efficiency Advice leaflet:** The energy efficiency advice leaflet has been found very insightful; however participants have asked for further assistance regarding the eco kettle beyond the leaflet and the vendor instruction sheet. Therefore an induction at the home-install for the eco-Kettle is being explored.

Lessons Learnt on Home Survey

No	Lesson Learnt
L5.1	**Duration:** From early observations the Home Survey can take from half an hour up to one and a half hour to be completed.
L5.2	**Successful Engagement:** It is important to engage with participants and explain the benefits of completing the survey in order to increase response rates.
L5.3	**Role of CFO team:** The support offered by the CFOs is a key element for the successful completion of the Home Survey, with the field officer reading the questionnaire for the customers, explaining what the different appliances are and providing assistance on the identification of appliances around the house.
L5.4	**Role of CFO team:** When participants cannot complete the survey during the installation visit, they may request the CFO to arrange a separate appointment to support them with the survey. Therefore, the protocol for the Home Survey administration has been revised including the opportunity for an extra visit to be arranged only for those participants that refuse to being left with the survey for self-completion
L5.5	**Appliance Model numbers:** In most cases the appliance model numbers are out of reach or not visible anymore as on old appliances where the label has become worn out, therefore they cannot be captured.
L5.6	**Language Skills:** The language skills of the CFO team are useful in cases to improve participant's understanding of the questionnaire.

Lessons Learnt on Non-Participation Survey

No	Lesson Learnt
L6.1	**Reasons for Non-Participation:** Half the responses (50%) are related to the fact that the customers do not have the necessary time to devote to the project due to personal circumstances. There are also responses related to the fact that the customers or their family were not interested and as such they decided not to participate (two customers, 33%). The fact that a proportion of customers are not interested in the project may be an indicator of future difficulties that DNOs will be facing when implementing energy efficiency and demand side response activities. In summary there is a variation of responses of the reasons of non-participation with the main reason being the unavailability of the customer's time to devote to the project.

Lessons Learnt on Communication Materials

No	Lesson Learnt
L7.1	**Project Envelopes:** A customer indicated that they would open the letter if they knew it were coming from their social housing landlord; therefore, the envelope has changed by adding the logos of the two social housing landlords (Tower Hamlets Homes and Poplar HARCA).
L7.2	**Advertisement of the Drop In Event:** The pilot study held a Drop in Event. Unfortunately the pilot Drop in Event was not attended by any household. It was felt that it was held too early within the projects' recruitment campaign, wasn't as well marketed as it could have been and the information provided wasn't clear that it was only around 15 minutes of people's time required rather than was mis-portrayed as a whole day. This resulted in the reminder letter being altered by removing the advertisement of the drop in event. Instead a separate leaflet is being developed.
L7.3	**Effectiveness of Project Flyer:** To date customers have contacted the project with no customer contacting their social housing landlord, therefore advertising a dedicated team and project contact details directs all enquiries to them. This makes for interesting learning when looking at the projects replication model and what support systems would need to be in place.
L7.4	**Terms and Conditions:** A significant lesson learnt was related to the fact that the customers were confused that there was a seven day cooling off period once consented when at the same time the project provides them the opportunity to leave at any stage through notification. Therefore the seven day cooling off period was removed and the ability for a customer to leave the project at any point remains.
L7.5	**Key Facts:** A lesson learnt was related to the fact that the customers do not usually have the time to listen to the document word by word and therefore providing the customer the key points and referring them to the terms and conditions is the best approach for customer recruitment.

Lessons Learnt on Recruitment Channels & Strategy

No	Lesson Learnt
L8.1	**Preferred Method of Contact:** The CFO team to follow the customer's preferred method of contact. The CFO team should not make assumptions on methods of communication and follow the method as defined by the customer, at the timeline defined by the customer.
L8.2	**Customer Interfacing:** Where the customer is highlighting that they will be in touch first, we may have to avoid any further door knocks (at the customer's request) in order to avoid coming across as a nuisance. After three days from the day that the customer indicated that they will be in touch, the CFO team to give the customer a reminder call.

No	Lesson Learnt
L8.3	**Customer Interfacing when the customer is busy:** The CFO team to leave a sorry we missed you card and leaflet in case they see that the customer is busy and completely unable to talk.
L8.4	**Customer Interfacing:** The CFO team to be patient while door knocking and wait for five minutes between knocking the door and leaving the property.
L8.5	**Assurance of non-affiliation with political parties:** The CFO team to re-assure the customers straight away if any concerns raised that we are not in any way affiliated with any political party.
L8.6	**Cases that the customer is not interested:** In case the customer expresses that they are not interested in the project, depending on their tone the CFO team to try to outline some key points of the project such as it is not a sales call and there are many benefits of taking part. Note that this strategy will apply only if their tone does not sound intimidating
L8.7	**Home Visits:** A technique that is recommended is to suggest to a customer a home visit on the phone. As face to face appointments are far more interactive, in cases that the customer sounds unwilling to engage over the phone, the CFO team to suggest a home visit. This lessons learnt is based on the fact that personal interaction through door knocking or home visit is more likely to result in the customer consenting to participate in the project.
L8.8	**Return of Surveys:** During the pilot study face to face reminders were conducted by the CFO team with pilot participants who had not returned the Energy Social Capital survey. This reminder process identified that two participants had not received the survey or had lost it. It is important to note that the survey is accompanied by a first class book of stamps as a 'thank you' for a participant completing the survey. Following this, the project has put in place a mechanism to issue a replacement survey on a case by case basis and has included a 'return address if undelivered' to the pre-letter and survey envelopes. This mechanism is believed to be able to maintain or even increase further the response to the Energy Social Capital Survey. The project did explore the option of posting the survey through recorded delivery but the postal charges for what it believed to be an infrequent occurrence were too substantial.

Lessons Learnt on Energy Social Capital Survey

No	Lesson Learnt
L9.1	**Response Rate:** To date a 73% response rate to the Energy Social Capital Survey has been observed indicating that the method developed for administration of the survey is sound. Early observations show that the selected method which aims to create respondent trust, create reciprocity and overall tries to reduce survey error should be adopted when high response rates are key for the robustness of research findings.
L9.2	**Administration:** The method consists of multiple points of contact with the recipient: a pre-notice letter, the questionnaire, a follow-up postcard and a reminder from the CFO team. The pilot study indicated that both the follow-up postcard and the CFO reminder are important steps to increase the response rate, with several surveys being returned after the third and some after the fourth point of contact. Additionally, one of the participants requested the CFO's support to complete the questionnaire showing that having a local team participants can refer to is not only a key element for customer recruitment and engagement but is also beneficial from a research point of view.

No	Lesson Learnt
L9.3	**Social Capital:** The findings thus far suggest that electricity usage and energy related issues are not a specific or overwhelming concern for the targeted fuel poor group, but most have social resources they can turn to if there is an issue they'd like to discuss. To this extent the findings are broadly in line with those from other communities, but returns to date are too small to allow for meaningful analysis or interpretation; the project will continue to administer, collect and analyse surveys received.
L9.4	**Energy Efficiency Questions:** When the consented households were asked what would be the first thing they would do if they had a question on electricity in their home, 46% (5) said they would ask someone they know, 46% (5) said they would check media sources. 9% (1) said they would approach an organisation or group. These findings coincide broadly with the findings from the focus group undertaken by the project in June 2014.

Lessons Learnt on Focus Group

No	Lesson Learnt
L10.1	**Focus Group:** Considering the fact that the focus group provided the project with feedback on the communication material and recruitment channels, which were accordingly modified and results in successful outcomes for the pilot study, it is recommended that engagement with a sample number of people from the targeted population tool is an effective means for improving the communication strategy.

Lessons Learnt on Stakeholder Mapping

No	Lesson Learnt
L11.1	**Stakeholder Engagement:** Stakeholders were very willing to discuss and talk about this project, and offer names or organisations that would be good to contact.
L11.2	**Duration of Activity:** The overall process may take longer than expected due to several reasons (set up of a Data Privacy Strategy for approaching stakeholders; concerns on management of expectations of those who are contacted; time taken for contacting people and arranging interviews, especially when face-to-face; etc.). As a result, the efficacy of the exercise may be reduced if the stakeholder engagement takes place during recruitment phase. Adopting a decentralised approach for managing some of the interactions with stakeholders may help speed up the process and engage with stakeholders earlier.

9.0 Conclusions

This report is focused on the customer recruitment lessons learnt generated by the project and the last chapter summarises the key lessons learnt and conclusions generated from the project.

Within the pilot study of the project, the CFO team approached 36 eligible fuel poor households for participation in the project and 15 of these customers consented to participate. This figure represent a success rate of 42%, which is higher than the targeted response of 33%, and can reflect the fact that the targeted customer pool (fuel poor) are willing to engage in energy efficiency and demand side response initiatives. The main motivation of the fuel poor households in participating in the project was the prospect of saving cost through lower energy bills in the longer term, which demonstrates the fact that the fuel poor customers have clearly articulated the project proposition and the prospect created through smart meters, energy efficiency and time shifting tools.

It is also evident the fact that the approached fuel poor customers appreciate their social landlords and would be more confident if they knew that their social landlord was involved in the project. Considering also the fact that the social landlords hold the customer information (contact details, previous violent history, etc.) and building information (phone entry system, meter location, etc.) which are of valuable support to the customer recruitment, it is realised that partnering with a social landlord for energy efficiency and demand side response activities is a value adding activity to the DNOs and energy suppliers. The social landlords could provide all necessary information to the DNOs and energy suppliers in order to prioritise the customer engagement and could also use their trusted relationship with their tenants in order to communicate key messages to them. Further to the direct partnership with organisations such as social landlords or community centres which have access to valuable information and an established relationship with the targeted households, it is worth undertaking a stakeholder identification exercise within the local area, as it can be seen that multiple organisations are present in the targeted area and could have also an established relationship with the targeted customer group and be acting as advocated of the project. For the project, 75 organisations have been identified as stakeholders within the trial area, prioritised and will be approached by the CFO team in order to communicate the project and its objectives.

Regarding the customer journey, it was proven that the door-knocking activity, which involved personal interaction between the customer and the CFO team, was the most successful means of recruitment, as it generated 60% of the sign ups (nine customers). The success of the door-knocking is also attributed to the fact that the CFO team was made from CFOs who shared similar cultural and ethnic characteristics with the approached customers and the fact that they shared knowledge of the local area. It is recommended that in future recruitment campaigns the door-knocking activity is the predominant way of recruiting customers, with the posting of the communication materials and phone calling activity supporting the former mean of recruitment. It is also evident the fact that the door knocking activity was most successful during Saturday afternoons, followed by 12:00 – 14:00 and early evenings during the weekdays.

The CFO team is a key element to the customer recruitment campaign, as the team represents the face of the project in the public. The setup of the team as well as the training schedule should be carefully designed in order to equip the team with the necessary skills for building a successful relationship with the targeted customer group and satisfy the objectives of the recruitment activity. With the targeted customer group of the project, it has been found that employing people with similar characteristics and backgrounds will generate positive results for the project and a positive experience for the customer. For future campaigns on energy efficiency and demand side response it is recommended that a similar approach is followed for the CFO team selection. In regards to the training schedule, it needs to comprise of a variety of elements, spanning safety protocols and technology awareness training to social research training.

The review of best practice in recruitment of fuel poor customers and the focus group that has been undertaken by the project in June 2014 has supported the shaping of the communication materials and strategy in order to appeal to the targeted group. Considering the response rate achieved and the positive response of the customers on the customer engagement materials and the CFO team, it is proven that the effect of the former measures (literature review and focus group) are beneficial for the project. It is recommended that in future campaigns of energy efficiency, demand side response, or other purpose, at least one focus group with a representative sample of the targeted customer pool is undertaken in order to obtain feedback on communication materials, customer engagement strategy and channels.

Within the pilot study of the project six customers explicitly stated that they do not want to participate in the project. The main reason (50%) was the unavailability of the customers to devote time to the project due to personal circumstances (medical problems or other daily activities) while some customers responded that they did not find the project interesting (33%). The former fact was anticipated as the project would come as a change to the approached customer, and change always creates friction. The percentage of people that are unavailable would probably be reduced if energy awareness campaigns have been undertaken outside of the project and these persons have realised that their input to energy efficiency and demand side response

activities is low on an ongoing basis and the potential benefits is likely to outweigh the effort involved. In addition, this may be a message that could be communicated more frequently by DNOs or other parties in the electricity value chain. The second fact, which is related to the non-interest of customers in these initiatives, could be a burden when rolling out energy efficiency and demand side response activities. Similar mitigation activities as described earlier could increase the interest of customers in energy efficiency and demand side response.

Finally, the project had looked at the energy social capital of the pilot participants through the administration of the respective survey, which generated a response rate of 73%. Such high response rate can indicate the willingness of the targeted fuel poor customer pool in supporting energy related initiatives and provide valuable information. With only 11 surveys received and analysed to date, findings must be regarded as being anecdotal. With such small numbers, subsequent findings may show very different trends. Currently, the findings from the surveys broadly indicate some level of information seeking about energy and a fair amount of 'energy social capital'. That is seven out of the 11 respondents knew people in their social networks to whom they would turn for energy related advice, and three respondents (23% of the pilot population) had had a conversation in the last six months related to electricity. Trust varied through the sampled population, with a slight majority trusting people over not trusting people. Another key learning is related to the question what would be the first thing they would do if they had a question on electricity in their home, 46% (5) said they would ask someone they know, 46% (5) said they would check media sources. 9% (1) said they would approach an organisation or group.

Based on the findings from the pilot study of the project, literature review, industry consultation, focus group and other project activities undertaken the recruitment strategy of trial 1 has been revised accordingly and the recommendations for future energy efficiency and demand side response campaigns are completed.