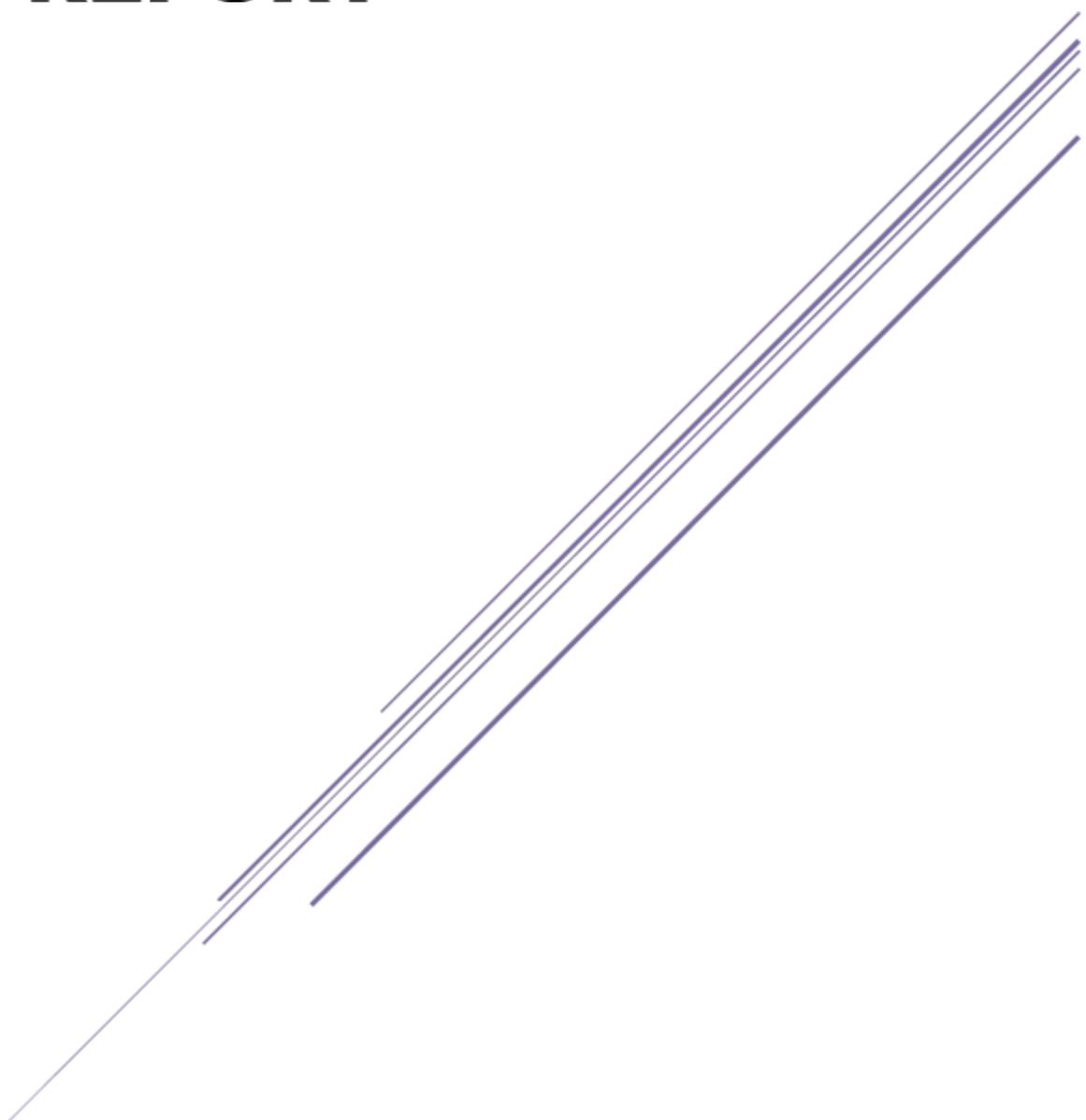


# **TWO STREETS OF SOLAR COMMUNITY ENGAGEMENT REPORT**



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August 2016

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## PROJECT BACKGROUND AND DESCRIPTION

Easton Energy Group (EEG) is a not-for-profit Community Benefit Society which exists to help the people of Easton save energy, money and carbon. In practice this means helping people to find sustainable ways of making fuel-poor households warmer as well as managing or reducing their energy consumption. EEG works alongside other local organisations to reach all members of our community. EEG also communicate the intangible concepts around energy utilising appropriate engagement tools (e.g. an 'Energy Bike' powering different types of light bulbs to allow comparison), as well as explaining complex projects (e.g. Owen Square) to local residents.

### *Project rationale*

The Government has published a Community Energy Strategy (January 2014) whereby it aims that '*any energy group that wishes to forward an energy project should be able to do so regardless of background or location*' (p7). Moreover, the most recent Community Energy Strategy Update (May 2015) states '*communities may be able to supply electricity to their local areas. Energy supply is key to the success of community energy. It will help communities to bridge the gap between energy consumption and generation and empower them to take full ownership of local energy systems*' (p36). Project TWOs emphatically fulfils this policy aim.

Easton is a ward of 13,541 people (2011 Census) in the dynamic city of Bristol. In 2010, Bristol Energy Network was established and in 2013 produced its very own Community Energy Strategy with a vision of "*a city where everyone has access to sufficient affordable low-carbon energy for their needs; where wise and innovative use of energy empowers citizens and enhances the economy, with active communities across the city generating and managing a significant amount of their energy need.*" This clearly sets a mandate for exploring methods of urban localised energy distribution as proposed by the TWOs project.

Keen to explore ways to make renewable energy affordable to all and have a benefit to the community members of Easton Energy Group researched possible options. The members identified that Bristol has plenty of rooftop space which could easily host solar panels, and suggested a community-owned large scale solar installation programme. Following the dramatic FiT cuts, the project was scaled back and re-packaged into the TWO Streets of Solar project, to connect solar on neighbouring roofs to form a micro-grid.

### *Location rationale*

Easton ranks in the 20% most deprived neighbourhoods in the country. Easton is an urban area, mostly comprised of terraced houses. The majority of these were built before 1919 and 50% of dwellings are social housing, with 34% being owner occupied and 16% private rented. 90% of properties have mains gas; with the remainder mostly using electricity as the main heating fuel.

On two streets in Easton a total of 113 houses back onto an alleyway, originally built to facilitate the later construction of houses on Chelsea Park. This alleyway would more easily facilitate the installation of the proposed micro-grid and therefore reduce initial costs making the project more financially viable at this stage.

Overall, the energy demand across the local housing stock as a whole equates to some 130 GWh with emissions at over 38,500 tonnes of CO<sub>2</sub> a year. This equates to an average energy demand per home of just over 22,000 kWh, emissions of around 6.6 tCO<sub>2</sub> and energy bills in the region of £1,200 per year. There is then a strong rationale to explore different ways to reduce these bills, helping those in fuel poverty, reducing carbon emissions and overall energy demand on the national grid.

Easton is recognised as having a strong community spirit and is known as the ‘Street Party Capital’ of the UK. There are many active people in the community and a large number of people self-employed or employed locally (as evidenced by a large number of businesses registered on social media websites). There are also many community-led initiatives such as Easton Arts Trail, Easton Food Assembly, Feaston, and the BS5 Jumble Trail, demonstrating there are people willing to put time and resources into the community. Easton is therefore a well-suited community in which to trial such an innovative scheme.

## PROJECT SCOPE

This feasibility study aimed to assess the willingness of residents living on Chelsea Park and Colston Road to participate in a community energy project.

Applying lessons learned from other similar projects, great care and attention was applied to managing expectations of residents. The technical report suggested that the project would only be available to a smaller section of the residents so community engagers took care not to ‘over-sell’ the project and to highlight the fact the project was currently in a feasibility stage. In addition, as the micro-grid at this stage could only be installed in the two specific streets, caution was also paid to keeping marketing materials to the two streets and large-scale street events were avoided as to not cause confusion.

The study also aimed to gather additional data beyond the use of the micro-grid proposal in order to better inform future Community Energy interventions. Indeed the broader objective is to inspire people to get involved in community energy and take control of their energy bills. Thus any additional

opportunities to help residents beyond the micro-grid installation were acted upon, yet have not necessarily been detailed in this report.

The Bristol Community Energy Strategy also calls to '*Investigate potential for a community ESCO in partnership with the local municipal energy company (in order to be able to procure locally and generate income for community renewable where possible)*'. Therefore, the study also wished to find out if there is sufficient interest amongst residents to form a steering group in order to take the project forward and to be genuinely community-driven.

## CONSULTATION

### *Process*

Questionnaires were selected as the primary method of data collection for community engagement process. Questionnaires are an effective engagement tool in themselves whilst also being an excellent data gathering tool. This data would primarily determine the feasibility of progressing with the installation of the project, as well as being of additional use to inform wider community energy strategies.

### *Questionnaire design*

The questionnaire was designed collaboratively amongst the community engagement team and subsequently shared for commenting and editing online. The questionnaire aimed to collect information on the households' energy requirements, their potential willingness to take part in the project and their wider thoughts on community energy. The design aimed to capture as much relevant data as possible without seeming overbearing and impossible to complete by the resident.

Careful attention was paid to the phrasing of questions. For example, we wanted to gain an insight into householder's ability to pay for their energy bills. As this can be a sensitive issue and one which many people may not wish to disclose, the question was phrased as '*do you feel your energy bills are too high?*' thereby indirectly indicating whether the householder was comfortable with their bills.

### *Warming-up the community*

Initial informal contact was made through an existing community group the 'Back Alley Project'. The back alley had been prone to fly-tipping and residents found that waste simply attracted more waste. In response a group of concerned residents self-organised to clear up the alleyway. In January 2015 the group were awarded grant money from the council's Neighbourhood Partnership and received assistance



from the Shift Bristol Permaculture students to install planters in order to grow plants to make the alleyway more wildlife friendly. There remains a group on Facebook with 21 members, a regular 'Back Alley' work day and the promise of an 'Alley' party. We made contact with some residents via this group.

Bespoke flyers (see appendix 1) were then distributed to all households within the catchment area with some brief details of the project.

### *Questionnaire deployment*

Surveying was undertaken by 3 members of Easton Energy Group, each carrying identification, along the two streets over the course of a week with additional follow-up door knocking taking place in subsequent weeks. Each household received at least 3 door knocks, with households receiving an additional attempt to contact or further contact when collecting further questionnaires. Door knocking sessions were carried out at different times of the day so households received a knock during the day, during the evening and on the weekend.

A previous director of Easton Energy Group co-developed a specialist online software 'Community Energy Manager' ([communityenergymanager.org](http://communityenergymanager.org)) - a platform specifically designed to capture household data relating to domestic energy consumption. The project trailed using Community Energy Manager to compose and structure the questionnaire, capture the data in the field and record the captured data. Paper versions were also used as an alternative as well as a digital version which could be emailed. Data from the paper and email versions were then uploaded to Community Energy Manager.

For residents who were unable to complete the survey on the doorstep we offered an electronic version or a print version which they could complete in their own time. We also offered to return at a more suitable time to suit the resident.

Following initial rounds of door knocking an open meeting was arranged and took place in the 'Back Alley' to maximise ease for residents to attend as many had children or commitments. This meeting allowed residents to hear in more detail about the proposed scheme and to ask specific questions.

An email was sent to everyone who had consented to signing up to a mailing list and had requested additional information. We provided links to our website where they could access two key documents- the 'project summary' which offered a rationale (see appendix 6) and a 'householder FAQ' (appendix 3) where some of the likely concerns of residents (for example around liability and mitigation) were detailed. Residents could also request to have a paper copy of the documents which were delivered to

their door on request. Residents were also invited to email any thoughts, questions or suggestions to the email address [info@twos.org.uk](mailto:info@twos.org.uk).

## RESULTS & INITIAL ANALYSIS

### *Headline results*

The flyers prompted 6 households to respond to register their interest even with very few details. Contact made through the Back Alley Facebook group also elicited a number of positive responses and sparked curiosity amongst many residents.

Out of a total 113 households we made contact with 83 residents (73%), surpassing our aim of contacting 60%. A contact rate of 80% was achieved on Colston Road, demonstrating great potential for carrying out further contact work on this street in particular.

Out of all the households, levels of interest in the project ranged from 40% to 74% depending on the section of street - 40% refers to the upper half of Chelsea Park whilst 74% refers to the upper half of Colston Road.

Of people contacted, over three-quarters (77%) of people showed some interest in the project, this figure was similar across the two streets and upper and lower halves.

The first email sent to residents was opened by 65% of recipients which compares favourably to the not-for-profit average of 20% (Mailchimp) and even to Easton Energy Group's own newsletter (33%). Follow-up emails were opened by 50% of recipients.

A total of 13 householders attended the Back Alley event and many took an active interest in asking questions.

Residents willingness in principle to host solar modules on their roof is particularly high – see also appendix 10 for an aerial triaged rooftop map (residents were informed of the overall concept behind the project but had not absorbed any details).

### *Further analysis*

Figure 1 clearly shows of those residents engaged the majority were definitely willing in principle to host solar panels. Home ownership status is also indicated on the graph, to further contextualise responses.

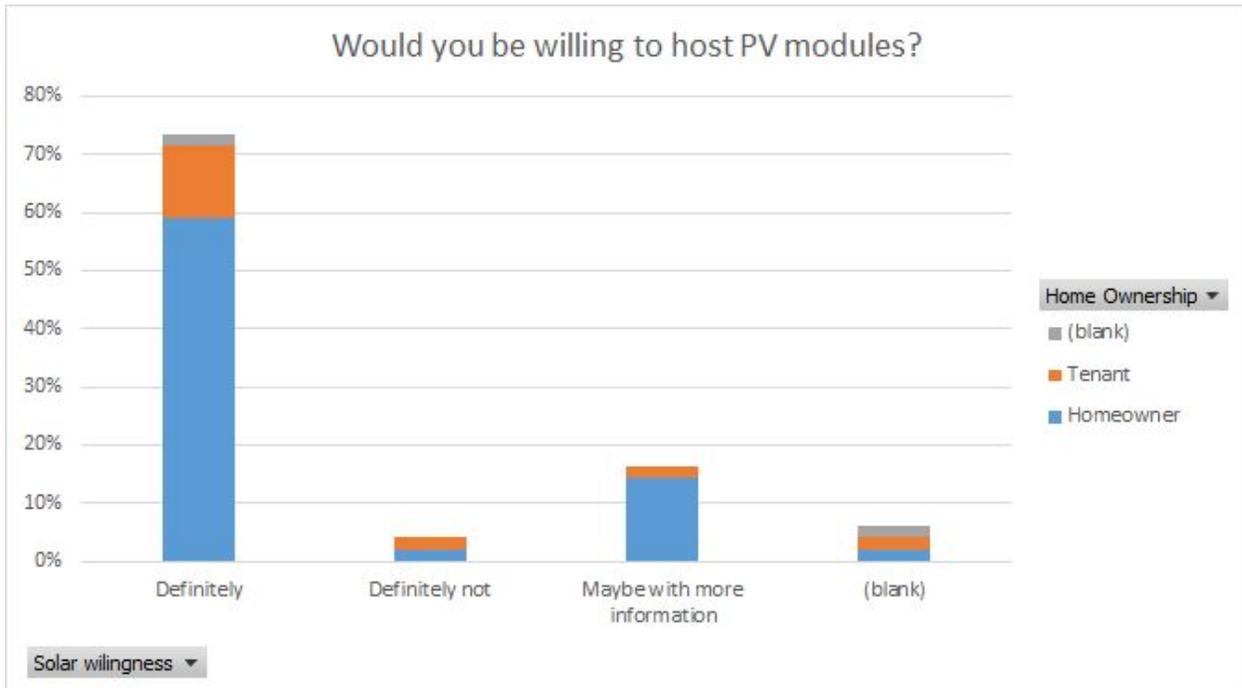


Figure 1

Initial interest may wane, however the indication that 35 residents would like to attend a residents' gathering to further explore the idea is very encouraging, figure 2 shows again the vast majority of engaged residents responded positively.

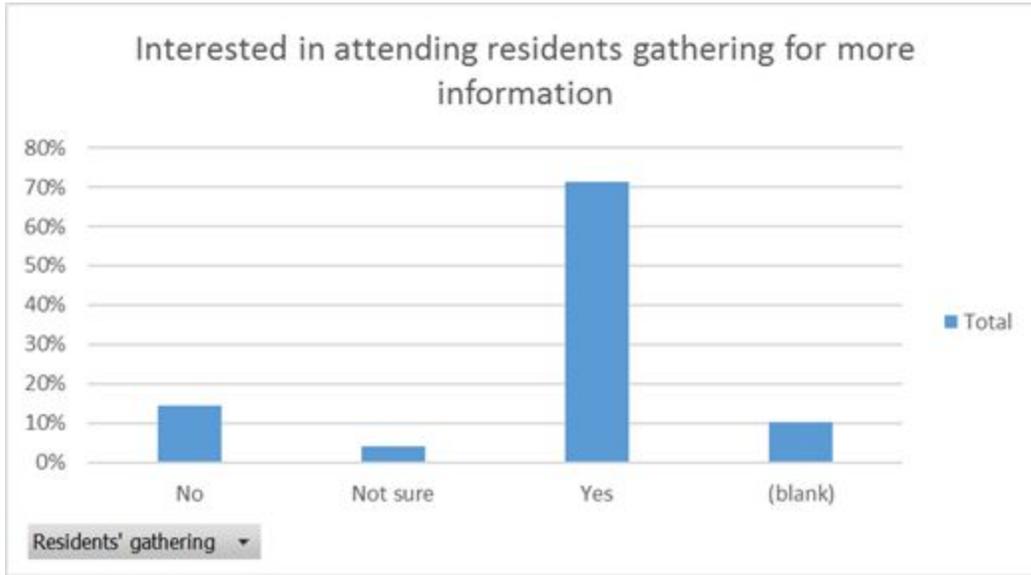


Figure 2

Following the TWOs Tour we received some feedback (appendix 8) from a resident who had been supportive from the outset however raised some concerns over the financial return and ownership of the modules. Concerns specifically were raised over the financial returns on offer to residents or that there was sufficient ‘compensation’ in return for hosting solar modules on their roof. These concerns would need to be addressed in further community consultation in order for the project to progress.

An initial consideration of the project was to offer External Wall Insulation in ‘exchange’ for hosting a cable running under the eaves of their roof. Following consultation with residents, however, there was only a lukewarm reception to having External Wall Insulation installed at no charge. Some residents were sceptical of its effectiveness or appropriateness, having already had a survey through the council energy-efficiency scheme Warm-Up Bristol or having been put-off by negative stories. Therefore, it is likely EWI will not be included in the scheme and will concentrate on offering clean, renewable localised electricity distribution.

The additional questions and concerns raised in the public meeting were recorded and included in the Householder FAQ document. Residents were also offered paper and digital copies of these.

The wider aims of the door knocking and community engagement also yielded promising results.

The vast majority of residents contacted supported the principles behind Community Energy with a small number unsure of what was meant by the term. This represents an extremely encouraging signal of support for engaging residents to really become pioneers of Community Energy initiatives.

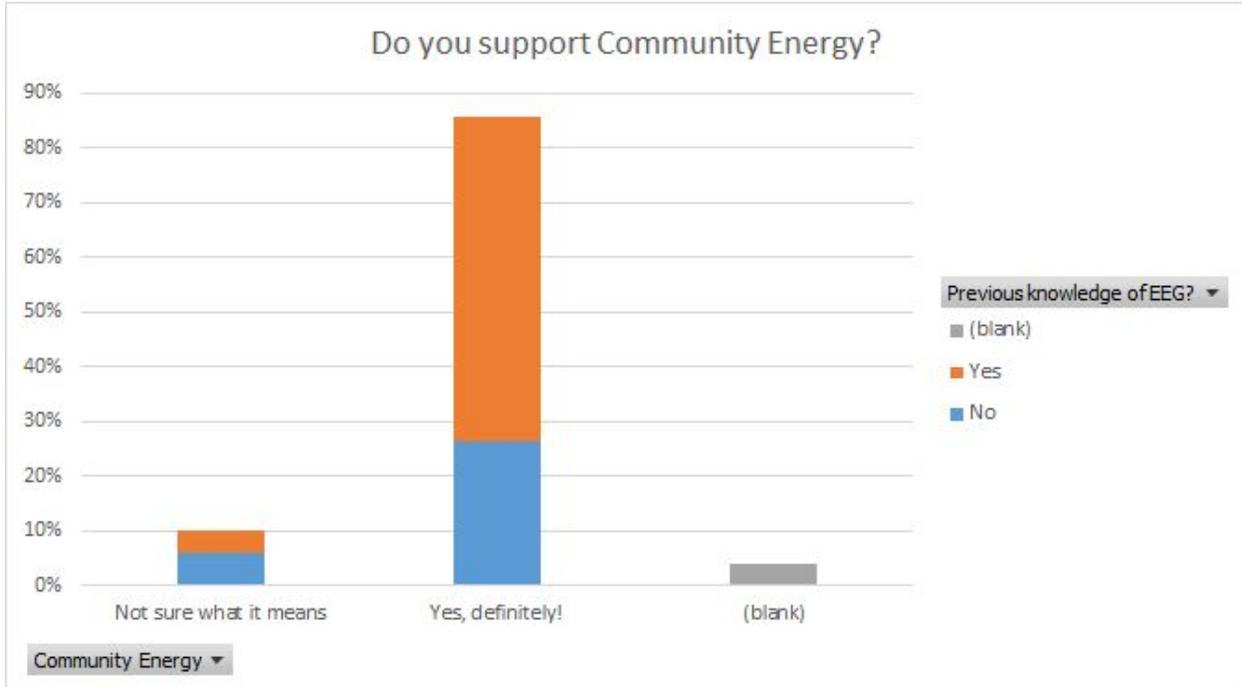


Figure 3

The recognition of Easton Energy Group (EEG) and more pertinently the distinction of EEG as a Community group is very important. As noted in the Bristol Community Energy Strategy *‘there is a lack of clear distinction between community, council and energy company initiatives’* and therefore people may mistake the intentions of implementing the energy project. Promisingly 63% of the residents recognise Easton Energy Group, with most people associating the group with the Owen Square Community Energy Project (an inter-seasonal heat-storage system based nearby at the Easton Community Centre). Nonetheless, feedback from a resident following the information event suggested we weren’t clear enough in describing the ‘distinct characteristics’ of Easton Energy Group which could form a key part of encouraging residents to take part in a financially-unrewarding scheme.

Indeed, many residents responded positively to other community energy initiatives such as having a thermal imaging survey of their homes. This suggests residents may respond favourably to further community energy interventions.

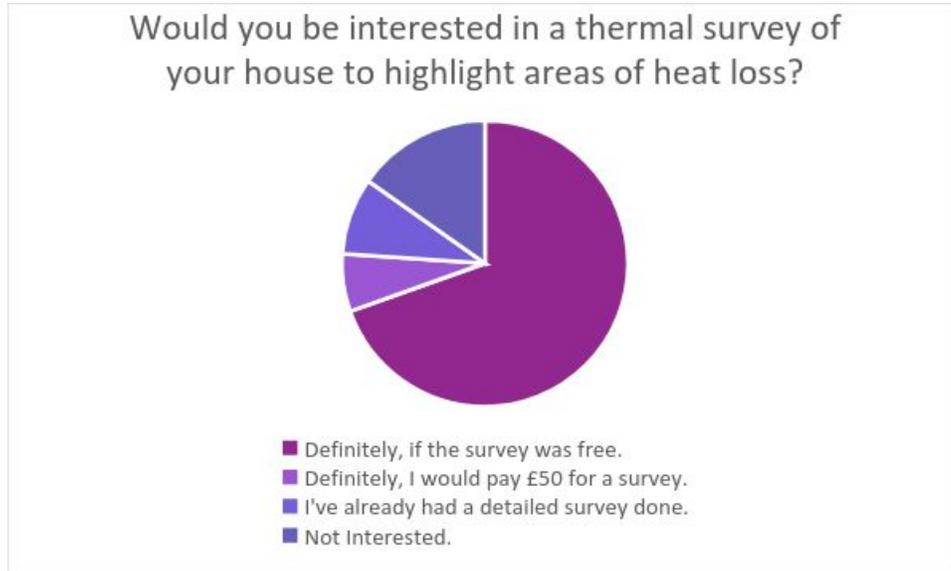


Figure 4

Data was also gathered on household energy bills, occupancy rates (to assess daytime electricity demand) and energy measures already installed.

EVALUATION

The dramatic cut in FIT and uncertainty in policy meant it would be impossible to deliver the original project. The project was also 'handed over' to a new set of Community Engagers and with a tight schedule the team had to work quickly to carry out the engagement, despite the fact a longer process of reciprocal conversations between residents and the community would be more appropriate.

Carrying out engagement over the summer holidays naturally presented obstacles with many people being away, especially given the high number of family households living on the two streets. This meant many people were unable to attend meetings so we adapted our plans accordingly to focus on

questionnaires and postpone meetings until the ‘return to school’ and regular schedules from September.

Initially it was intended to carry out the questionnaire with residents and inform them relatively little of the actual project proposal (inviting them instead to an event and directing them to sources of further information). Nevertheless, people’s natural curiosity meant that typically we would instead describe the concept of the micro-grid without specific details at the doorstep. There was some difficulty in finding the right balance of providing information and gathering background data.

None of the questionnaires sent to residents via email were returned to the TWOs inbox within the requested time-frame. This highlights the importance of ‘securing’ time at the doorstep to complete the questionnaire and establish ‘first contact’ with residents.

The innovative nature of the proposal meant that without a blueprint we could only provide so much information to householders. Some households struggled with this lack of information and may have been put off by the associated uncertainties. Those householders with a busy family/work life were largely indifferent as to where their energy came from, yet were not opposed to community energy. At the same time, some households appreciated the detailed level of consultation and feeling they could shape the project.

There is inevitably some ‘self-selection’ bias to be aware of in the results. Residents who opened the door and were willing to engage with us were generally supportive, and in the majority likely of a certain social category - as can be noted, for example, from the high proportion of homeowners (see graph on willingness to host PV modules). Those who weren’t willing to engage at the door, or even not wish to open the door (occupancy often obvious as indicated by an open downstairs window or voices from within the house) were likely from other social categories, less well represented in the survey. Therefore, finding alternative strategies for engaging all members of society would be advised for future engagement initiatives.

#### NEXT STEPS

Initial research conducted as part of the feasibility study strongly suggests there is sufficient willingness within the community to progress with the micro-grid project.

It is now possible to invite residents to an open meeting to further discuss, develop and plan the project and ultimately form a steering group. Having secured support from Regen SW, Easton Energy Group can

be confident in bringing on board the necessary skills, knowledge and expertise required to develop the project into reality.

Exploring funding models and finding ways of attracting investment will be key. It is likely the project will attract sufficient grant funding to cover the battery storage system and parts of the micro-grid installation as these fall under innovation funding, yet it is likely we would have to raise money to purchase the PV modules. Suggestions are to launch a community share offer along similar lines to Bristol Energy Cooperative, whereby people can purchase low-cost to high value shares. The rate of interest and return would need to be discussed and agreed by the steering group.

Although not specifically necessary for the project, further exploring people's perceptions of community energy through in-depth interviews (see appendix 9) could benefit community engagement approaches to future community energy projects.

Further funding has been sought from the Bristol Community Energy Fund to further support time and resources required to develop the project as well as providing additional Community benefits to those not directly involved in the micro-grid scheme.

Exploring potential work opportunities for local people is a key part of the next stage. As noted in the Bristol Community Energy Strategy a *'benefit to the community is the building-up of a workforce trained in the deployment of energy generation and efficiency measures, thus unlocking untapped potential'*. Therefore, we will contact local colleges and local small businesses to assess the level of this untapped potential in the local area and assess the practicalities of offering internship or apprenticeship style placements.



## TWOs Community Engagement Report