



Solent Achieving Value from Efficiency

## Solent Achieving Value from Efficiency

SSET206

LCNF Tier 2 SDRC 3.2 Improve Customer Engagement



**Scottish and Southern Electricity Networks (SSEN) is the new trading name of Scottish and Southern Energy Power Distribution (SSEPD), the parent company of Southern Electricity Power Distribution (SEPD), Scottish Hydro Electricity Power Distribution (SHEPD) and Scottish Hydro Electricity Transmission. SEPD remains the contracted delivery body for this LCNF Project.**

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## Executive Summary

Solent Achieving Value through Efficiency (SAVE) is a Low Carbon Network Fund (LCNF) project that aims to robustly trial and establish to what extent energy efficiency measures can be considered as a cost effective, predictable and sustainable tool for managing peak demand as an alternative to network reinforcement. The core of the project looks to understand the demand side response (DSR) capabilities of domestic customers through four key methods: LED lighting; data informed engagement; data informed engagement and price signals; and community energy coaching. These methods are trialled through three sequential trial windows allowing the project's engagement methods to iteratively improve and evolve throughout SAVE's project lifecycle.

This report explicitly details 1) the information that the SAVE project has collated through 'open day' format events with customers; 2) the format of these events, what worked and what didn't; and 3) viewpoints of individuals with regards to trial design (past, present and future).

A series of 10 open days have either been held or are planned across SAVE's project lifecycle in order to maximise the benefits of qualitative feed-in to the trials. Each one of these events is designed completely mutually exclusively of each other (excluding events 3 and 4). The strategy behind each of these events is detailed in section 2.

Section 3 of this report provides more detailed insights into those open days that have been carried out at time of writing, notably open days 1-5.

Open days 1 and 2 were carried out using a focus group style format with participants of SAVE's 'data informed + price signals' group and data informed engagement' trials respectively. These events aimed to understand the means by which a DNO might communicate with customers under DSR initiatives (and the merits) as well as feedback into what worked in SAVE's initial trial windows in order to inform future trial windows. Key findings note a need for a careful balance in message quantity to engage people but not to cause annoyance, whilst the messages sent themselves should be made clear and accessible without being seen as common sense. Learning taken from these events to future trial windows include the fact that engagement material which stays in the home such as fridge magnets and stickers may act as a better prompt than traditional forms of engagement that may get thrown away. Additional to this, people feel competition and relation to other households provide greater context and interest in their demand profiles.

Open days 3 and 4 were run with SAVE's Community Energy Coaching (CEC) trial participants. With the CEC trials split across two communities, one rural and relatively affluent, and the other urban and relatively less affluent. Open days 3 and 4 took the format of sequential focus groups in each community, first collating feedback on the trials until that point in time and sowing a seed for what

future engagement could look like in later trial periods. Participants were next asked to talk through these initiatives with friends and family for discussion at the second focus group session. This format of engagement had the benefit that only a small number of people were invited to the group discussions allowing for detailed discussions, whilst potentially portraying the views of numerous individuals. A key finding from this event was the need to make energy usage both visible and understandable to customers. By providing a simple graphical representation of the energy usage differences between basic household appliances people are able to start to build understanding of what appliances use most energy in the home and hence the best actions they might take to change consumption behaviour. In addition to this, participants noted how by providing messaging that linked with their communities' agendas and interests, people were more inclined to listen to an ask as opposed to how they would respond to 'another' corporate mailer. Statistics from the CEC trials on SAVE back this up showing how DNO branded material sent out to households received a response rate of less than 10%, whilst an equivalent locally branded mailer received response rates in excess of 50%.

Open day 5 provided a different angle for the CEC trials, this time to engage residents of the community closest to the project to align key project learning and legacy plan expectations (this will be reviewed later at Open Day 10, involving a revisit to the CEC trial communities a year after the trials close). Within the urban less affluent community, this legacy planning highlighted ambitious goals for ongoing engagement and desire for the community leaders to retain formal ownership of the local group. In the rural, affluent community a more structured approach of a sustainability strategy was devised, however with less ability for community ownership it was determined that legacy would sit best with a formal organisation such as the Parish Council.

A summary of SAVE's recommendations from the open days run up until now on the project is provided in Section 4 of this report. The core underlying message that is increasingly apparent as DNO's explore the merits of closer customer interaction to manage electricity networks (i.e. innovation projects including: CLNR, NTVV, LCL, EnergyWise etc.<sup>1</sup>), is the need for visibility and accountability of wider social benefits that may accrue through smart solutions as a means to defer network reinforcement. The learning from SAVE is feeding into the further development of Constraint Managed Zones to accelerate the realisation of benefits and maximise the likely hood of CMZ bids that will have both network and broader societal benefit

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<sup>1</sup> Customer Led Network Revolution (CLNR), New Thames Valley Vision (NTVV), Low Carbon London (LCL) and EnergyWise are all examples of other Low Carbon Networks and Innovation funded projects with a focus on DSR.

## 1 Introduction

### 1.1 Background

Solent Achieving Value from Efficiency (SAVE) is a Low Carbon Network Fund project that aims to robustly trial and establish to what extent energy efficiency measures can be considered as a cost effective, predictable and sustainable tool for managing peak demand as an alternative to network reinforcement. The project will target domestic customers only in the Solent and surrounding area in the South of England, which is representative of much of the UK, and the measures to be trialled will include deploying a technology, offering a commercial incentive and taking an innovative approach to engagement.

The SAVE project is divided into four main methods of domestic demand side response (DSR), namely LED engagement, data informed engagement, data informed engagement with price signals and community energy coaching. Different means of testing these methods will be explored through three trial windows between January 2017 and December 2018. Full updates detailing the evolution of these methods can be found in the SAVE annual project progress reports (PPR's).

Throughout the execution of the SAVE project, SSEN have ensured that the upmost attention is paid, not just to the quality of project outcomes, building upon previous industry learning; but also in ensuring both scalability and replicability of trials. The purpose of this report is to explore the qualitative feedback from the project's participant population with regards interventions both run on SAVE and planned for future trial iterations.

Such interaction will occur with customers on a routine basis throughout the SAVE project's lifecycle, allowing the project team to gather greater detail regarding what participants really feel about the engagement central to SAVE's methodology. This evidence can be used to support quantitative findings, defining both future trial iterations and wider innovation projects; ultimately driving an optimal solution for business as usual (BAU) energy efficiency related customer engagement.

These 'open day' events may take a range of different formats as deemed most suitable for engaging a given population or achieving the project's outcome. Inherent within this, the report will also be able to recommend different approaches to engaging customers in this 'open day' format; what worked and what didn't.

The report is structured to initially portray SAVE's strategy with regards open day events throughout the project's lifecycle, moving on to provide an overview of all planned open day events. The core of the report is made-up of a summary of those open day events run at time of reporting and how they have looked to share "progress experience and next steps with customers" (SSET206, SAVE Project

Bid) as well as providing insight into legacy and long-term impacts of trial interventions. Key lessons learned from the collation of events are summarised at the end of this report.

## 1.2 Project Outcomes

Within the SAVE Project Bid document (SSET206) it is defined that SDRC 3.2 will:

***Produce report summarising objectives and outcomes of open days- January 18.***

This is supported by the statement that the project will:

***Hold open days supported by online/paper information to share progress, experiences and next steps with customers involved in trials on a six monthly basis.***

This report confirms this deliverable has been met and provides evidence for the 10 open day events held and/or planned throughout the SAVE project timeframe:

**Table 1 Open Day Structure**

Open Day	Date
1. 4 TO 8 – Trial Group 3	May 2017
2. 4 TO 8 - Trial Group 4	May 2017
3. Up until now focus group- Community Energy Coaching trials	September 2017
4. What's next focus group- Community Energy Coaching trials	September 2017
5. Community Energy Coaching trial convergence video	October 2017
6. Joint community lessons learned- Community Energy Coaching trials	March 2018
7. 4 TO 8 Open Day round 2 - Trial Group 3	April 2018
8. 4 TO 8 Open Day round 2 - Trial Group 4	April 2018
9. LED Survey - Trial Group 2	May 2018
10. Community Energy Coaching trials, one year on	November 2018

At point of submission, the SAVE project identified seven key knowledge gaps and four learning outcomes to be addressed. Those which can be built upon through this SDRC are detailed below:

- *[Learning Outcome]- to gain insight into the drivers of energy efficient behaviour for specific types of customers*
- *[Learning Outcome]- to gauge the effectiveness of different measures in eliciting energy efficient behaviour with customers*
- *[Knowledge gap]- What engagement approaches are available to DNOs to facilitate uptake of energy efficiency measures by domestic customers?*
- *[Knowledge gap]- What do DNO led energy efficiency campaigns look like and how can they be run successfully?*

- *[Knowledge gap] How enduring are the impacts of each measure and what costs if any are associated with sustaining the impacts?*

### 1.3 Method Definitions

The SAVE project bid document (SSET206) outlines four main methods of intervention that will be tested within the project. These were originally named as follows:

Method 1 (M1)- LED engagement

Method 2 (M2)- Data informed engagement

Method 3 (M3)- Data informed engagement and price signals

Method 4 (M4)- Community Energy Coaching

This however did not provide a reference number to the projects control group population. Throughout delivery of the project to ease identification of the methods being trialled each was re-named as follows:

Trial Group 1 (TG1)- Control Group

Trial Group 2 (TG2)- LED Lighting

Trial Group 3 (TG3)- Data informed engagement and price signals

Trial Group 4 (TG4)- Data informed engagement

Community Energy Coaching Trials (CEC or M4)

To avoid confusion and the risk of mismatch between delivery and reporting the project came to the conclusion the methods were better referred to by these names. Within this document all interventions will be referred to under their revised names.

## 2 Open Day Design

It was identified at the bid submission stage of the SAVE project that potential benefits could be obtained through closer interaction with the trial population than the core project allowed, namely to understand *“the value of local stakeholder engagement to DNO’s in developing/using energy efficiency measures”*, to *“understand the most effective way of engaging with different types of customer in order to maximise response”* and to recognise whether measures deployed might *“leave a legacy of a closer relationship between the DNO and customers”* (SSET206, SAVE Project Bid).

Balancing the value of close one-to-one engagement that can be achieved as a result of open day events, with 1) the project’s core function to robustly test trial initiatives, and 2) minimal noise and no cross-over/bias in the trials; required development of a vigilant strategy between SSEN and its project

partners at the University of Southampton (UoS), DNV GL and Neighbourhood Economics (NEL). Namely the project sought to ensure maximum value from engagement whilst minimising any biasing impact on trial results as a knock-on effect of this additional 'non-typical' engagement with the project population. In addition to this it was key to design a strategy so that each open day could occur mutually exclusively between trial groups; the reasoning for this was to avoid spoil and attrition between trials (i.e. if TG3 and TG4 participants were mixed, with one group being paid and the other not for the same interaction methodology there may be a risk of dissatisfaction and increased drop-out). These risks and their mitigations were captured in the risk register as can be seen in Appendix A- Risk Register.

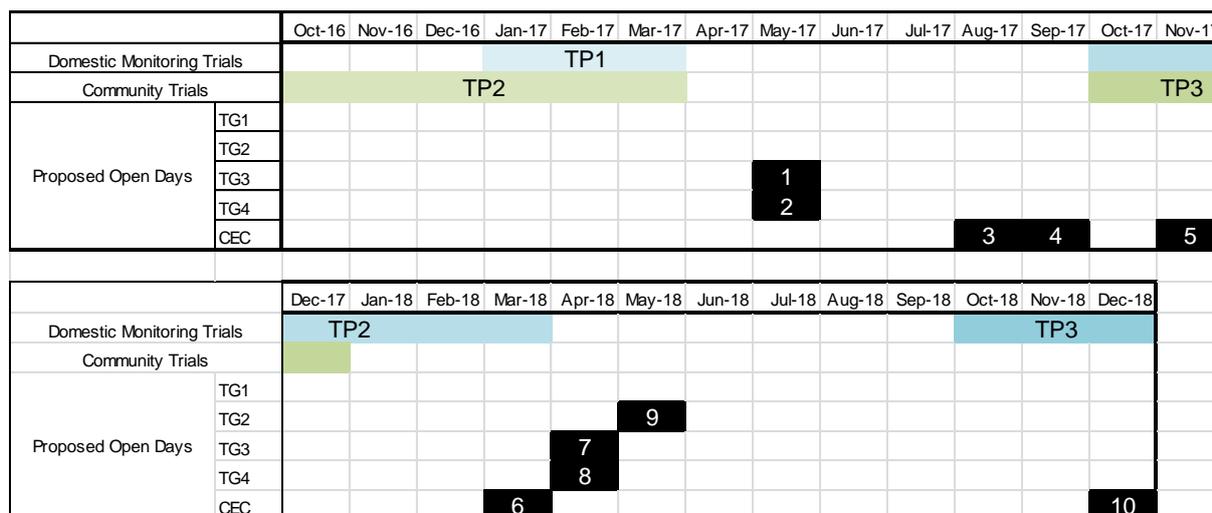
Following initial discussions around avoiding spoil to wider trial outcomes it was concluded (and discussed with Ofgem) that running events on a precise 6 monthly basis would provide little value to the wider project and that these open days should occur at tactically defined periods throughout the projects lifecycle. This allowed for benefits from the events to be maximised. When assessing what events to run and when; consideration was paid to three core functions that such engagement could facilitate, namely:

- One-to-one discussions with the project population providing detailed qualitative evidence and feedback that would otherwise not be captured.
- Provide a vision and feedback into what worked and what didn't in the last trial period hence shaping the next trial period.
- Obtain insight into the longer term/legacy of different trial interactions, given SAVE's 5 year lifespan the project can only predict how people might behave in the medium and longer term. Additional qualitative evidence to support these predictions may be obtained through 'open day' format events.

Where open days were seen to potentially create an unfair advantage to certain trial participants as a result of un-replicable additional engagement it was agreed that attendance would be limited to a small percentage of the total project population (<5%). This both limited bias and endorsed closer interaction with attendees (this allowed for conversations that were open, representative and gave sufficiently more opinion based detail than the surveys<sup>2</sup> carried out as part of the main trial design). With input from all project partners the below timeline of events was created:

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<sup>2</sup> Project suppliers BMG carry out 'recruitment surveys' and 'time-use' surveys throughout each trial window to support the University of Southampton's analysis.



**Figure 1 Open Day Strategy**

The Gantt chart style format at the top of Figure 1 simply shows the trial periods for those methods monitored at household level (TG1-TG4) where yellow represents TP1, orange TP2 and red TP3; with the CEC method following the same key, shown finishing 1 year earlier.

Given the mutually exclusive nature of these open day events the design and decision process behind each trial group’s events are highlighted in the below sub-sections.

**2.1 Trial Group 1- Control**

The control group on SAVE is set up to act as a direct representation of society given no third party stimuli. For this reason, engaging this group would not only warrant no new project outcomes but would cause spoil to the unbiased nature of this group; resultantly no open days will be run with project control participants.

**2.2 Trial Group 2- LED Engagement**

Following the minimal uptake of LED’s in Trial Period 1 (TP1)<sup>3</sup> and the resultant changes made to the delivery of Trial Period 2 (TP2) the project team concluded minimal value in engaging participants post TP1 and before TP2. TP2 involved a more pro-active approach to engagement of customers than TP1; this process involved a DNO booking appointments directly with customers and then making a site visit to install bulbs within customers’ homes. Given the longer duration of TP2 (6 months whilst the other trial periods are just 3 months) the project team set a target to have all LED installs carried

<sup>3</sup> See SDRC 4 section 5. TP1 tested uptake of LED’s as a result of DNO funded discounts.

out in the first half of TP2 (Oct 17- Dec 17) leaving the second half of TP2 available for monitoring the impact of LED's across the winter months.

Given the nature of engagement within the LED trial group, the project team identified two potential means of gaining additional value from qualitative engagement. The first of these being an open day style event. Given the minimal amount of engagement required in this format of trial it was determined this would be of limited value, and certainly not provide a platform for the same level of engagement as that which could be achieved in the more intrusive and subjective data informed trials (i.e. TG3 and TG4). The second option for engagement was to carry out a survey with a large sample of project participants to understand customers' views on the project's engagement methods, LED lighting and reasons for participating/not participating in TP2.

In discussion with partners and Ofgem it was determined that given the approach of this trial and the limited propensity for a survey to cause any spoil to the trial group, it would be of far greater value to discuss key outcomes with a representative proportion of the trial population via survey as opposed to collecting anecdotal evidence from a smaller sample.

This decision was further backed in August 2017 when the project carried out a pilot DNO led LED install with results showing an 80% uptake of bulbs across households. This level of sign-up over-and-above that hypothesised signalled most value in better understanding the potential longevity/satisfaction with this method. Resultantly event 9 was formed with project partners DNV GL taking leadership and survey design responsibilities.

It was originally suggested that this survey could take place in Jan 2018 immediately after installation of LED's had taken place to discuss the installs whilst they were fresh in people's minds. Following a wider partner review this was pushed back to May 2018. By holding the LED engagement survey after TP2 the project identified three additional project benefits;

1. By avoiding interaction during trial intervention periods the project minimised any risk of biasing the trial.
2. By holding the survey earlier in the year some participants may have only had bulbs installed a few weeks as a result to get a better understanding of bulb quality and customer perception it was determined better to allow time for project participants to form an accurate perception of the LED's (and allow the project team to understand if any bulbs had been replaced)
3. Holding the LED survey just after TP2 acted as an appropriate prompt to participants that the project was still live and hence could be used to minimise attrition/resolve offline communications (as has been seen as a problem before in the periods between live trial windows).

### **2.3 Trial Groups 3 and 4- Data informed engagement and price signals + data informed engagement**

Given the more interactive nature of engagement with TG3 and TG4 participants these groups were seen as the prime target for discussion centred 'open day' events. It was determined that given the comparable nature of specifically these two trials (customer receive the exact same material except one group has a price signal attached to it) the project saw value in a mirrored open day engagement. This was to allow qualitative learning into both the data informed material itself and how opinions then differed when customers also received a financial incentive (though it should be noted that the samples selected for open day events are/will be by no means large enough to be statistically significant and hence outputs should be treated with caution and are being supported by quantitative evidence).

It was determined that these open-day events should take place following both TP1 and TP2 in order to ensure project learning was built upon following each trial iteration. In order to avoid spoil across the data informed trial groups and maintain replicability of trials (by not giving open day attendees an unfair advantage/additional engagement prompts to other participants) event attendance was kept small at <20 people (approx. 2% of trial population). Smaller groups also allow for clear interaction, ensuring all attendees have their voices heard and opinions captured. It was decided that this event would take a focus group format with engagement from key project partners. Attracting a mix of attendees was also key to the event's delivery and hence incentives (£30<sup>4</sup> was paid to each attendee) and location were key considerations in organising open days 1 and 2. A full summary of these open days can be found in section 3.1 below.

Following the success of the first open days (1 and 2, described in section 3.1) the project looked to build upon learning to shape the next events with TG3 and TG4 participants (events 7 and 8). It was determined that the format of open days 1 and 2 had worked very well and should be emulated in 7 and 8. Resultantly just two amendments to the open day structure were discussed. Firstly, to choose a less formal venue, it is thought a more open and comfortable format would encourage a more honest and conversational response from participants. Second was to move the event forwards a month in the project calendar, where events 1 and 2 left a month between the end of TP1 and the open-days there was evidence that material wasn't so fresh in people's minds and hence feedback may have been limited. By moving events 7 and 8 to directly after TP2 the project looks to maximise interaction.

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<sup>4</sup> Using the expertise and experience of project partners and project suppliers BMG Research it was determined £30 was the minimum amount that could be paid in order to incentivise attendance by those 'less inclined' to attend otherwise.

## 2.4 Community Energy Coaching Trials

The community energy coaching (CEC) trials are by their design best placed for 'open-day' format events given the direct format of engagement crucial to this trial's delivery. Resultantly it can be argued that the CEC trials carried out numerous open-day format events with residents as part of their intrinsic design, outside of those detailed within this report. It is therefore important within these trials to define clearly the difference between an open day and a project event run as part of the trials themselves. Those events within the trial were by nature, engagement events in order to progress the community coaching methodology of interacting with participants; open days on the other hand have been designed explicitly to extract information around project approaches, specifically this also includes those within a community less likely or willing to engage directly otherwise.

Five different open day events were scheduled for the CEC trials, more than any other group, this is in part due to the more resource-intensive nature of engagement within the community coaching methodology. Additional to this, the alignment of the CEC trials with the other trials (the CEC trials finish one year earlier - see SAVE Change Request 2) has opened additional opportunities to revisit trial populations a year on from the final trial period.

The CEC trials on SAVE explore engagement in two opposing communities one rural and affluent, the other urban and less affluent. Open days have been structured to largely be mirrored across the two communities, as such each open day relates to two parallel events, one in each location.

The first two open day events held on the CEC trials (3 and 4) aimed to share experiences from the recently finished second trial period and feed into planning for NEL's (Neighbourhood Economics Limited) final trial iteration with a focus upon messaging options. These focus group sessions were held as two consecutive meetings, allowing the objective of understanding impact of previous trials to be assessed in open day 3 with a more forward looking strategy adopted in open day 4. This approach allowed NEL to understand what they did right/wrong in TP2, take this away/provide ideas to the community and then present different approaches to TP3 in the next session.

Open day 5 took place in November 2017 looking at bringing together the various 'community strategy' and 'energy strategy' strands of the coaching trials' engagement work. The format of these open days were changed somewhat from events 3 and 4 mentioned above to both align with different objectives and to trial a different means of engaging attendees to that of 'traditional focus groups'. Prior to open day 5 NEL created a 10 minute video summarising some of the key learning from their trials as well as the value this could bring to the DNO, communities and third parties. This was then used as a means of validating NEL's interpretation of the process to date and as a prompt to direct discussion around 1) legacy in the communities, 2) benefits beyond direct engagement and 3)

opinions with regards to Business as Usual (BaU) partnerships (i.e. between the communities, DNO's and wider stakeholders).

Event 6 will provide an opportunity to collate all experiences and viewpoints from the CEC communities prior to the trials final reporting (June 2018) and legacy handover. Planned for March 2018, this event will engage both key local stakeholders and local residents in a more stylised review format to focus on the behavioural aspects of the project and how/if these have affected attitudes to energy and associated consumption behaviour. Given the different format of this open day it is currently expected that the project will procure the expertise of academic behaviour change research experts to tease out this learning in an effective and unbiased manner.

Finally open day 10 provides a unique insight into the longevity of trials that none of the other methodologies have the luxury of, namely because the CEC trials finish one year earlier than the rest of the project (June 2018). By revisiting the communities one year on from the end of the CEC live trials (Winter 2018), open day 10 is designed to understand the longevity and knock-on-effects of CEC trials in both the project's urban less affluent trial area and rural affluent trial area. One of the key knowledge gaps SAVE looks to address (see section: 1.2) is how enduring the impact of the CEC trials might be; it is intended open day 10 can play a key role in providing insight into that. Revisiting the trial communities a year on will allow understanding of the potential sustainability and added social value of closer DNO interaction with its customers and stakeholders. Resultantly the projects sees three target audiences for these events: stakeholders (Southern Water, Southern Gas Networks, local councils etc.), key community contacts (as drivers for change) and the wider community.

This event will also allow SSEN to see the value of the legacy planning carried out between trial leads NEL and the community coaches in each area which may unveil key learning outcomes around replicating such community focused trials. These legacy plans notably include:

**Table 2 Legacy Planning**

Urban Less Affluent	Rural Affluent
<ul style="list-style-type: none"> <li>Shirley Warren have constituted their community group, Shirley Warren Working Together (SWWT) and have ambitions to continue providing services and activities to the wider community (i.e.: clean ups, community café plans and parent/toddler groups, slow cooker clubs).</li> <li>Continued regular load-shedding (big switch off) events.</li> <li>Continued access to the materials designed on the project to engage residents (i.e. factsheets, magnets etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Within Kings Worthy there is desire for the community branding to provide an independent umbrella for local groups to use to promote issues of community benefits that fit the group's theme of: 'connecting people, places and power'.</li> <li>The opportunity to develop a sustainable KW strategy which multiple groups within the community could independently adopt is being explored as a more workable approach than to try and turn Connecting Kingsworthy (CKW) itself into a formal group that would have to be serviced and</li> </ul>

<ul style="list-style-type: none"> <li>• To invite the local MP to talk about wider energy policy issues that the community are interested in exploring as a result of the project.</li> <li>• To try and integrate energy into other community activities and make it something that they do across the board to embed learning locally.</li> <li>• To continue engagement with SSEN BAU teams to undertake community resilience planning.</li> </ul>	<p>compete for volunteer support</p> <ul style="list-style-type: none"> <li>• There is interest in creating exemplar community buildings</li> <li>• There is willingness to engage with SSEN BAU team to update resilience planning</li> </ul>
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It is intended these strategies will grow and develop throughout early 2018 and be collated in Open Day 6.

### 3 Planning and Outcomes

The section below provides an overview of each open day, including how they were organised, agenda and findings. Section 4 will then bring these events together to provide a summary of similarities, differences and learning outcomes.

#### 3.1 Events 1 and 2 (TG3 and TG4)

Following the first formal trial iteration for trial groups (TG) 1-4, the project looked to maximise understanding, provided by the University of Southampton's quantitative analysis, as to what messaging had been most successful/memorable in encouraging behaviour change. It was determined the best format in which to facilitate this was through a focus group style discussion with no more than 20 residents from TG3 and TG4 exclusively.

Both TG3 and TG4 open days were planned to be held on consecutive days from each other, with largely a mirrored format. The only difference between the event days would be the mention of payment to TG3 and the load-reduction event day messages they received as part of their trial.

Recruitment to the two events was initiated by a series of stratified samples in order to get as wide a spread of attendees as possible. Initial stratified sampling within each TG, (approx. 1000 in each) selected those who were in the 20% that had achieved the largest *reduction* in consumption across TP1 and those who were in the 20% that had showed the greatest *increase* in consumption/the

smallest decrease in consumption<sup>5</sup>. This was intended to provide diversity/extremes of response and points of view.

Following this sampling, participants within the Southampton area, closest to the open day venue at UoS, were prioritised to maximise recruitment success rates and minimise potential drop-out. Recruitment activities were deemed most appropriate carried out by BMG field teams given their expertise and relationship with project participants. Throughout the recruitment further sampling (based on the project’s recruitment survey information) was used to try to ensure an even spread of participants from varying socio-economic backgrounds. In order to best encourage a variety of attendees the events were held outside of working hours, from 6pm-8pm and 5:30-7:30pm in the evening respectively and a £30 gift voucher was offered to all open-day invitees which could be received upon attendance.

The total number of participants recruited for open day 1 (with TG3 participants) was: 22 of which 17 households attended. The total number of participants recruited for open day 2 (TG4 participants) was 20 of which 13 households attended. Statistics relating to demographics are displayed in figures 2-5.

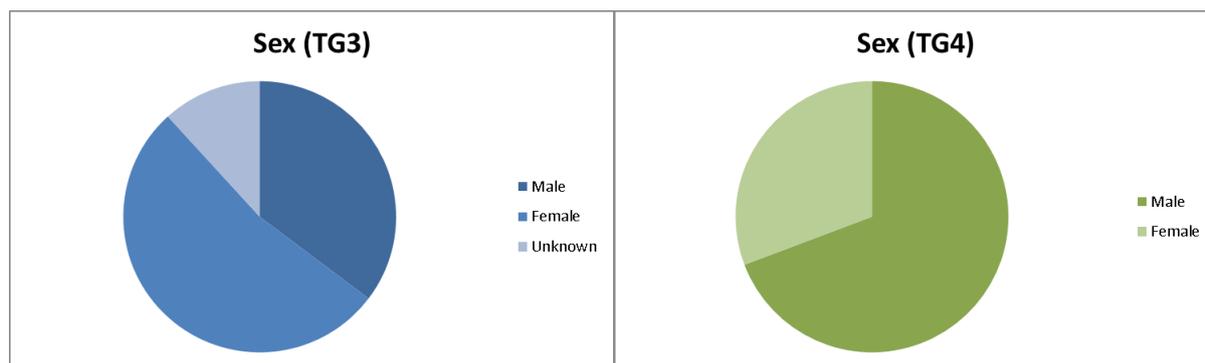


Figure 2- Events 1 and 2 sexes of attendees

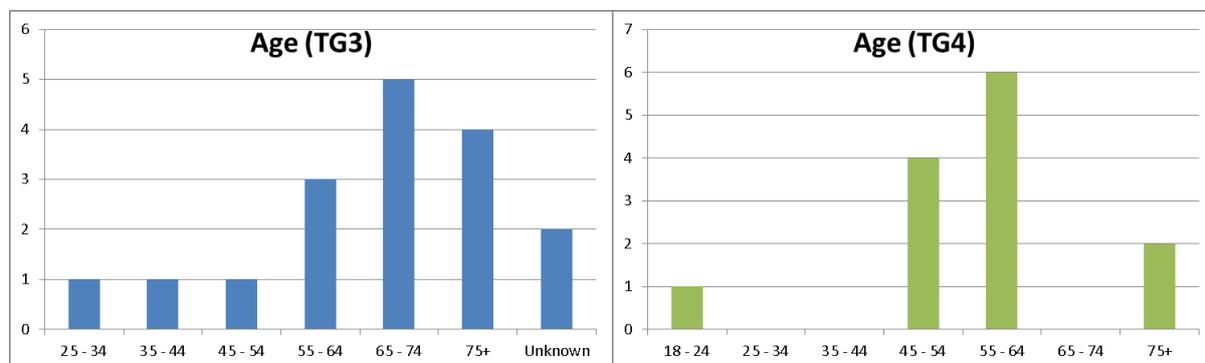


Figure 3- Events 1 and 2 ages of attendees

<sup>5</sup> Note this excluded the top and bottom 1% to mitigate against anomalies.

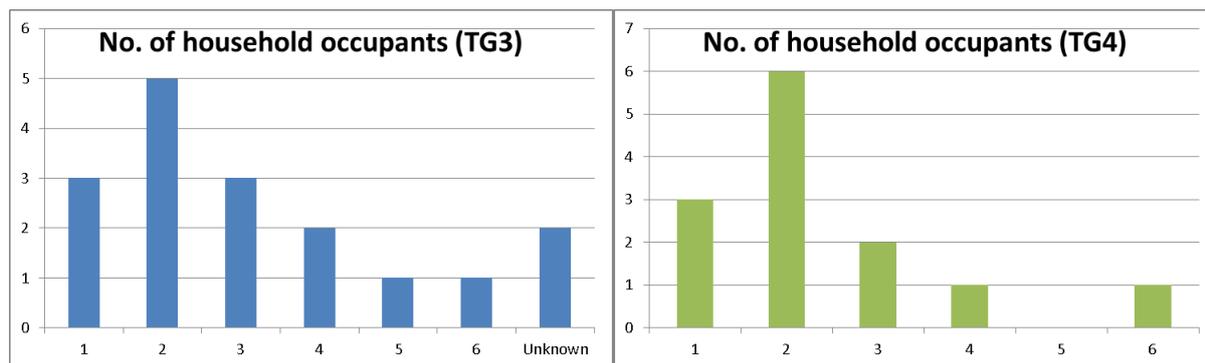


Figure 4- Events 1 and 2 no. of occupants

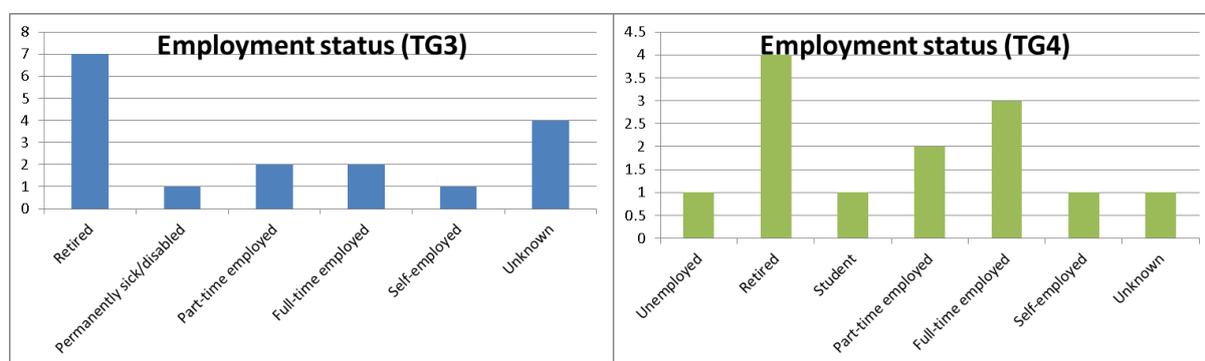


Figure 5- Events 1 and 2 employment status

Whilst it was never the intention of events 1 and 2 to attract a representative sample of society, given the small sample size, the project wanted to ensure a varied and diverse subset of society were represented. It can be seen that each event has a spread of different individuals, naturally there is a skew towards retired occupants often experienced at this format of event (similar observations were drawn within SSEN’s New Thames Valley Vision customer engagement activities).

**Agenda**

The purposes of these open-day events were initially two-fold:

- To better understand means by which the DNO may speak directly to customers and the merits (notably in terms of maximising trial response); and
- To gain qualitative feedback around what trial participants liked and did not like in TP1 (or if they took any notice at all) in addition to initial feelings around the approach being planned for TP2.

Whilst this information was deemed valuable to the project’s evolution, the project team remained diligent in their trial planning around the fact the group was not representative of the overall project population. A range of secondary merits of the open days such as disseminating some of the project’s

analytical findings and decreased likelihood of attrition can also be cited, however impact was deemed minimal.

The project team determined that appropriate attendees and hosts should include: SSEN (as the project lead), DNV GL and Behaviour Change (as those managing trial design) and UoS (as those most trial participants associate the project with and as an opportunity to disseminate their analysis). Subsequently the open day agenda displayed in Appendix B- Open Day 1 and 2 Agenda was created for circulation to attendees. This agenda split the open days in four key areas: 1) introduction, 2) the SAVE project – so far, 3) decoding energy data; and 4) what's next. Each of these sections is discussed individually below to give an overview of their format and purpose.

#### **3.1.1.1 Introduction: SSEN- SAVE Project Manager**

##### Format

The project introduction involved a 15 minute presentation providing an overview of the changing environment and challenges confronting distribution networks. In addition to how SSEN looked to address this through its range of innovation projects. The presentation slides can be found in Appendix C- Open day 1 and 2 Content.

##### Objective

Provide an introduction to who the DNO are and why SSEN are running the SAVE Project. The presentation was aimed to show customers the value their participation was bringing to delivering a more reliable, sustainable and cost-effective future for the electricity network.

#### **3.1.1.2 The SAVE Project – so far: Behaviour Change- Director**

##### Format

This section of the event was scheduled for about 35 minutes, providing an opportunity to hear project participants recall any memories from TP1. Behaviour Change adopted an approach that allowed them to gauge participants' memory/interaction with the trial period, before beginning to show some of the postcards and more detailed trial aspects. Summarised outputs are shown in Table 3 below.

##### Objective

The project was looking to establish what had worked within TP1 and what hadn't, as well as what people liked/what they didn't like about the project's initial messaging within these focus groups sessions.

### **3.1.1.3 Decoding Energy Data: University of Southampton- Research Professor**

#### Format

The University of Southampton provided a 20 minute presentation detailing (at a high-level) how the project was using the data being supplied by project participants and why this was beneficial to individuals, the project team and wider stakeholders. These slides covered: The Navetas Loop system, levels at which data is being analysed, highlighting key trends and differences between varying households. These slides can be found in Appendix C- Open day 1 and 2 Content.

#### Objective

This presentation was used to show the audience the value of information they provide to SAVE, with potential to minimise the chance of attrition<sup>6</sup>. It also provided an interesting oversight and conversation piece for those more analytically minded within the audience.

### **3.1.1.4 What's next: Behaviour Change- Director**

#### Format

Finally, the event day's last session took the format of another focus group. This time, given the information was new to participants, Behaviour Change gave more of an introduction to what might be done in the future<sup>7</sup>, before allowing participants to voice their thoughts, opinions and suggestions. Summarised outputs are shown in Table 3 below.

#### Objective

To gain insight and feedback into the brainstorming of interactions that could be deployed in TP2, as a means to best deploy a quality second trial iteration.

## **3.1.2 Event Findings**

Key points taken from each event are displayed in Table 3 below with a summary recorded alongside each one.

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<sup>6</sup> No participants who attended these events had dropped out of the project at time of writing (Dec 17) communications status of attendees is however consistent with the wider project population.

<sup>7</sup> No reference was given to trial windows, their timing or their duration, it was felt this was the best means to replicate BaU.

Table 3 Open Day Findings

Theme	Insight	After thoughts/ Comments	TG3	TG4
Trial messaging	Some participants noted that after 3 postcards, messages were too similar and the engagement became annoying. One person noted annoyance at postal mailing which could have been e-mailed more sustainably.	Despite this the project only recorded 7% participant drop outs in TP1. In TP2 material will be more varied and dispersed over time to avoid annoyance.	✓	✓
	Few people remembered the specifics of a message just that they received something to do with saving energy.	One hypothesis to this might be that the type of message (cut, shift etc.) has minimal impact, rather it is the branding and wider theme that has sticking power.	✓	
	Some people did comment how the message was common sense, they've heard it before or it doesn't get through enough	Trying to build unique branding and messages in a format that is new and exciting will be accounted for in TP2.	✓	✓
	People did note how the messaging reinforced minimising electricity usage until after 8pm.	This is a good insight into the 4-8pm branding working.	✓	✓
	With regards the Navetas portal 7/20 people had logged onto it. Of those that hadn't logged on some didn't even know about it and one didn't have a computer (other methods of access were highlighted i.e. apps). Of those that had logged on most said it was useful	When utilising the portals functionality in TP2 the project needs to consider wider awareness raising around the portals usability. Given that at least one participant each day asked around portal access this may not be clear enough to participants	✓	
	"What's been good overall is the information on how to reduce (consumption) not just messages asking me to reduce."	This supports the assumption that the project should not just ask for demand reduction but should educate people in how.	✓	
Marketing	Pink envelopes were distinctive and the material did not look like junk mail so most participants actually read it. Messaging itself	Having a unique selling point (USP) that sets material aside from the rest of the post a household gets does increase the chance of material	✓	✓

	was also seen as ethical.	being read.		
	With regards the formatting of material most people remembered the trial booklet and postcards (80%) when prompted and around 1/3 remembered e-mails. Everyone in the group read the first letter.	As anticipated this shows a variety of channels have impacts with different audiences. TP2 will continue to inform which forms of material are most successful with which people, any why.	✓	
	Some people claim to have never got any e-mails.	This is assumed as due to spam filters or initial opt-out at time of installation.	✓	
	It was noted how the photographs of actual people stuck in peoples heads.	Adding a personal element to the messaging and an alternate sticking point proved memorable.		✓
	It was noted how if the branding was more clearly associated with the UoS people might have associated it with the project better.	It is important to note from this and other feedback that a lot of people relate the SAVE project to the UoS. This begs the question of how replicable branding material with UoS logo is for a BaU roll-out, however does highlight the benefits of a DNO partnering with local trusted organisations on such initiatives.		✓
Load-shifting	Dishwashers and laundry were noted as easiest to shift, several people also noted use of a timer to assist in this behaviour. On the other hand, even when people wanted to help they note how other appliances not always possible to shift, TV watching and cooking specifically were noted.	This is in cohesion with other LCNI project findings and as anticipated prior to TP1 given the research conducted by DNV GL in SDRC 1. This is especially interesting as the project never specifically mentioned cooking as an activity to shift.	✓	✓
	Participants noted that action does require a significant amount more planning ahead.	This is an interesting comment as the project progresses to see if behaviour change remains an additional task or becomes habit.		✓

	Some people note how it makes you feel good because you're doing a good thing and others note the direct monetary incentive of using less energy.	This provides a classic example of how different people have different motives, again this was captured in SDRC 1.		
Event day and incentive payments	Few remembered the e-mail prior to the event day, some people remember the text on the event day and the e-mail after the event day.	The event day was advertised by both text and e-mail. The sample is not large enough to be conclusive around the impact of e-mail, however future event days will explore different means of engagement.		N/A
	Of those who achieved the event day target and received a voucher not all had actively tried to reach the target 10% reduction.	This is as anticipated, the project was aware that natural variability within a households consumption would impact event day accomplishments. Whilst TP2 considered ways in which this can be minimised it is also true that in a BaU Critical Peak Pricing (CPP) payment structure rewards/penalties may be awarded on a similar basis.		N/A
	Time of use tariffs mentioned as a good solution but would have to benefit customers somehow.	This is reflective of the points portrayed by suppliers in SDRC 4. It is interesting that this point came from the non-incentivised trial groups suggesting an opinion that a monetary motive would support change.		
Analysis	Some people gave voluntary examples of why profiles may look the way they do or reasons for changes in profiles this included one quote of 16:30 being shift change in the local hospital hence shift in consumption and another home citing ownership of a Tesla battery.	Comments like this are the sort of unprompted conversational pieces that may come from open day type events. This illustrates examples of reasons for consumption profiles that would not otherwise be considered by the project team.		

Trial Period 2 feedback	Competitive nature of trial iteration was received positively. People note how they want to see how they compare to the norm or similar households. People also noted competition against yourself as beneficial.	It was also highlighted that no one saw any issues with their data being used for competitive elements of future trials.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Stickers were seen as a good idea to act as a reminder and noted as useful in complementing a fact sheet.	N/A	<input checked="" type="checkbox"/>	
Other	Two people thought the 4 to 8 messaging related to smart meter install instead of SAVE Project.	In rolling out schemes such as data informed engagement it is useful to understand what other 'competing' or complimentary initiatives may be taking place in the local area.		<input checked="" type="checkbox"/>

It is clear from Table 3 above that a wealth of viewpoints and information were gathered through the project's initial open days. The project has taken these key points into consideration in its trial design for TP2, however it remains mindful that opinions are those of individuals not the project population as a whole. These open days were not formally recruited and conducted research and is not statistically representative of the project's population. These outcomes are therefore thoroughly reviewed against existing literature and have been scrutinised by project team expertise to ensure decisions made around trial design were optimal to maximise value from the **entire** project population.

### 3.2 Events 3 and 4 (CEC trial)

Following the integration of community coaches in TP1 (January 16 - March 16) and the subsequent building of local communities with their own bespoke dedicated distinctive strategies (DDS) in TP2 (October 16-March 17), Neighbourhood Economics (NEL) as CEC trial leads, felt the summer prior to TP3 offered the optimum opportunity to engage residents in an open-day format session. This looked to understand both the impact of past engagement and provide direction for their final (TP3) interventions strategy.

It was determined that these events would look to engage the wider community, that is those residents outside of the direct community groups with whom the trials central strategy was co-devised. This would give honest feedback from residents affected by the CEC intervention from a more impartial and un-biased viewpoint. In order to recruit a representative and varied sample of local residents, it was

determined these events would be incentivised at the same £30 level as events 1 and 2 discussed in section 3.1 above.

The strategy adopted by NEL looked at running 2 focus group sessions in each community. Due to the nature of these focus groups attendee numbers were intentionally kept low (8-10 people) allowing all participants a chance to voice their opinions. Focus group 1 was designed to set the scene to attendees and gain initial feedback. Focus group 2 gave participants time to digest conversations and asked them to discuss themes with a wider audience and relay thoughts, as well as to brainstorm ideas for TP3 (some of which were initiated at the first focus group).

Invitations were initially circulated via Facebook and by email using local contacts with the 'ask' being for participation in 2 focus group sessions with vouchers as an incentive (see sample leaflet in Appendix D). Events were held at 7:30pm on weekday evenings in an effort to maximise availability of different demographics of the community. In Kings Worthy (KW) (rural affluent area) this approach was successful with 8 individuals coming forward to take part in local meetings. Due to prior commitments some attendees were unable to attend the dates available so the first focus group session was delivered twice to enable all of the 8 people to attend. The group then combined for the second session.

In Shirley Warren (SW) (urban less affluent area) however, there was no initial take up at all. In discussions with community leaders, NEL agreed on a different approach which saw local, personalised invitations being made to a 'cheese & wine' evening for a chat about 'energy'. On the afternoon of the event it was thought that 8 or 9 people might attend but on the evening 21 people (including the 2 local organisers) turned up; many having come along after hearing about the event from those invited and wanting to be helpful.

The format of the focus groups was put together to provide insight into two key facets of the trials, namely learning from previous trials and strategy for future trials. For participants attending the event, focus groups were intentionally informal with discussion generated around a few key questions as below:

- The distinction between supplier and network operator;
- If peak demand is the issue what are the drivers for people changing their behaviour (save money, save the planet, help your operator, help the community);
- If the project wants to demonstrate the power of the community in a big switch off (BSO) event what is the best strategy for maximising participation and the practical steps needed to engage different groups of people within the community;
- Beyond this project if the project was to leave a legacy in terms of some form of distinctive community branding and/or partnership with SSEN and other service agencies, what is the 'pitch' that people are most likely to buy in to and take ownership of?

The second element of the strategy was to build feedback around wider themes that could provide insight into the design of TP3. Engagement activities in both TP2 and the co-designed trial strategy put together by both stakeholder and community groups began to shape the categories for interaction outlined in Table 4 below.

**Table 4 trial decision points**

Key driver for change	planet
	money
Key message	shift
	cut
Greatest messenger traction	DNO
	local
Normalising behaviour	transactional
	cultural
Wider BAU integration	single issue
	multi-agency
Community-led change	add-on
	new-innovation
Striking the balance between ideas and numbers	quantitative
	qualitative

The final collation of this and the outcomes taken forwards into TP3 are displayed in Appendix E. Following the first session most participants were very willing to consider the issues, reflect upon the conversations held and to challenge their thinking with friends and neighbours. One of the groups even asked for a brief questionnaire they could use to facilitate discussions with others. Most group members in practice preferred to hold more informal conversations.

The second session therefore looked to talk in more depth about what messages should be used and how NEL could engage more widely across their communities. Feedback from the open days was recorded and key lessons identified to inform the design of TP3. Headline comments and discussion points are summarised in Table 5 below.

**Table 5 qualitative feedback**

Theme	KW Open Day 1 and 2	SW Open Day 1 and 2
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Knowledge of DNO and peak consumption	People were not clear on DNO/Supplier distinction.	People were not clear on DNO/Supplier distinction. (Those in the SW stakeholder group had better knowledge).
	People see no consequence of not shifting peak demand. People note that experience of outages is a key motivator for change.	
	Notes of people stating “what am I supposed to do” signals need for greater education. Some even note “not my problem”.	People were unaware of peak demand and wanted to know what action they should take.
Visibility of energy and how to shift usage	People know energy is finite, but not how to make a difference. Without a smart meter there is no way to measure usage (it’s also not visible like water/recycling). Most people also pay bills by direct debit so don’t see real cost of energy.	Some people had been offered smart meters, however there is mixed understanding about their use. People like the opportunity of better control of their usage.
	People note they’re used to not wasting water/food/recycling- the issue is getting people to think about energy in the same way. A nudge is needed to change habit i.e. 5p carrier bags.	
	People note that there is no/minimal personal gain through shifting so it therefore needs a new/different incentive.	
		Actions checklists would help remind participants to save energy.
		A usage display to remind householders and/or the community was cited as potentially useful (i.e. partially switching off street lights).
	People wanted to know how they could reduce consumption. Discussion around simple myth busters/factsheets to give clear answers around energy saving.	Discussion around simple myth busters/factsheets to give clear answers around energy saving.

Engagement mechanisms	People noted that face to face engagement has far more impact than leaflets.	
	People not willing to change cooking times, especially families.	Cooking seen as too difficult to shift. Elderly slightly more flexible and willing to change these habits.
	Children work as a good 'nag' factor to engagement.	
	Fridge magnets used in TP2 cited as attracting children's attention.	Freebies like fridge magnets/activity packs etc. are useful reminders to saving energy.
		Some attendees thought there should be price incentives to encourage behaviour change.
	(In family households particularly) women were noted as more in tune with daily household behaviour/activities relating to energy use. The impression was men tended to be more technically focused.	
Household drivers	Praise of good tag lines i.e. "can it wait til after 8".	Praise of good tag lines i.e. "can it wait til after 8".
	People find messaging around saving money/environment 'samey' and in some cases patronising. People don't like being told what to do by someone who has no idea/connection to their lives. Engagement needs to be personal/targeted.	People find messaging around saving money/environment 'samey' and in some cases patronising. People don't like being told what to do by someone who has no idea/connection to their lives. Engagement needs to be personal/targeted.
	Being part of a caring community noted as important to people. Additional motivation through comes through collective action- If people know everyone else is doing something they do it themselves.	Desire for a community based incentive i.e. an award.
Community Engagement	Identification that changing behaviours should come from within the community as well as top down measures.	

	Cited that in future competition between communities could be a key driver for change.	Comparisons to neighbours would help shape 'normal' behaviour.
	People like the idea of a power rating graph that simply shows appliances that are 'heavy users'. To take this a step further it would be good to see a simple cost per appliance per use (challenge of appliance rating noted).	When showed material that could be used in TP3 participants were most enthusiastic around the material visualising power rating of household appliances. This raised a lot of questions around cooking/washing at different temp.'s/on different settings as well as different efficiency ratings.
Energy Literacy and Next Steps- TP3 material	Noted that the idea of a community that has pride in its attitudes and leaves a legacy for children resonates with all.	
	Messaging around any 'big switch-off' event(s) need to be clear so that people understand what they're doing.	Group liked the idea of a big switch off and chance to come together as a community. They were so enthused they agreed to meet again to progress planning.
	The group suggested local avenues for promotion and their willingness to support an event.	The group suggested promotion via an all community leaflet drop, local bill boards, bus stops, local shops, community buildings, through the school, local press and radio, the website and Facebook.

### Summarised Findings

As can be seen from Table 5 above a multitude of quotes and comments were captured following the initial CEC open day events. In order to best relate these to trial delivery, analyse common themes and provide comparison between the two trial communities the project team has worked to categorise these into 6 distinct sections (seen in the column "theme" in Table 5). The rest of this section will look to summarise these discussions and their outcomes.

#### a) Knowledge of the DNO and peak demand

Very few of the focus group participants noted knowledge of what a DNO is/ their role or when/what peak demand was. Upon clarification participants became far more open and willing to engage, specifically in conversations around shifting electricity usage to off-peak times, as well as: renewables,

conservation and outages. NEL have previously circulated two fact-sheets '*where does your electricity come from*' and '*why is peak demand important*'. These however were not distributed to the whole community but a subset of 180 households targeted for specific interventions in TP2. This insight into lack of understanding around network operation signals a need for wider distribution throughout the community in TP3 to support the trial's objectives.

#### **b) Visibility of energy and how to shift usage**

People noted that they were very aware of 'the usual' cut message, however a message to shift energy usage was seen as more interesting and compelling. As a result of this people were generally less aware of how best they could 'shift' energy usage. Resultantly NEL took this feedback on-board at their first community open-day and created an array of material for distribution at the follow-up event. A power chart noting how much given household appliances use was noted as most valuable. There was a clear need for simple and visual information to support people in making choices about what items to use and when. This will be a key piece of engagement material in TP3, however could be expanded further by providing understanding to how different rated appliances compare and the way in which they are used (i.e. washing at 30°C instead of 40°C).

#### **c) Engagement Mechanisms**

Literature reviews carried out in SDRC 1 suggested at the outset of SAVE that most people felt being asked to move washing/drying activities outside of 4-8pm was reasonable. Cooking on the other hand did not resonate with this level of flexibility. The only exception to this instance was some older attendees who noted greater ability to move meals and reminisced to history where such resources couldn't be taken for granted. Solutions to cooking were explored, for instance slow cookers, microwaves and batch cooking, this gained weighting once people understood the energy consumption of different appliances. In KW in particular this was of interest where disposable income to buy such kitchen appliances is generally higher. Further supporting material of low energy recipes were seen as helpful and practical in bridging a shift in cooking habits.

In summary, in light of understanding peak demand, participants better understood the value of shifting usage out of these periods noting varying degrees of flexibility and differing solutions available to assist in such processes. Resultantly in TP3 the CEC trials messaging will ask householders avoiding peak loading to 'hit' big items that will make the most difference to their household load.

#### **d) Household Drivers**

Messaging about saving money and saving the environment used in TP2 was seen as too familiar and not interesting or novel enough to catch people's attention. In some cases such messages were even associated with negative connotations of 'top down' messaging where people felt they were being told

to do something that was good for them and that they had no connection with the messenger or interest in the message. Of the two themes, saving money was seen as the more universal driver, although levels of savings achievable and perceived as motivational varied widely according to individual circumstances. Particular praise on the other hand was paid to the 'can it wait til after 8' message used on fridge magnets, the local branding coupled with a 'request' as opposed to a 'demand' was seen as most succinct to the community driven approach and the 'shift' attitude.

Brainstorming around alternate messaging with both a community and networks drive were deemed interesting but unlikely to have traction without further work to engage wider audiences on the areas discussed in (a) and (b). Within this brainstorming people began to relate their usage of energy to that of other resources, namely water, food and material waste and that visibility of energy was a key challenge that separates it from other limited resources. For people to engage with the mentality of not wasting electricity the group felt a wider societal/cultural change was required as opposed to more individual behavioural change. Resultantly the idea of taking community based action was seen as a more positive motivator. Following the debate, material in TP3 will test the slogan 'can you reduce your use' tying in with the idea of promoting more habits and routines as part of a lower energy lifestyle.

#### **e) Community Engagement**

Leading on from the last section groups in both communities showed enthusiasm towards their local branding and liked the idea of being part of a caring community. A key area of focus was the value in engaging children both to act as a 'nag' factor in encouraging change, but also to educate the next generation. The hardest part of engaging the community was noted as interacting with single working or retired households given less avenues through which to interact; a multi-faceted approach to engaging people was cited as the best avenue to engage different groups.

Participants at the events showed support for the idea of a big switch off (BSO) event as a great opportunity to provide both focus and build a sense of community. In both communities there was a feeling that the BSO might lead more naturally to future community wide initiatives.

#### **f) Energy Literacy and Next Steps**

It is clear that in general people within both communities have limited engagement or understanding of energy literacy (how it's generated, distributed, bills, appliances, kW/kWh etc.). There is therefore a need to talk differently around energy to relay facts quickly and concisely. Those who are interested in the detail will often already know it or be motivated to find it; the majority of people wanted simple effective information. In response to this, NEL developed a number of factsheets for use in TP3, including a 'myth buster' based on the common questions asked in the focus groups, this could be built upon as part of the legacy of the project (see Appendix F- CEC trial factsheets).

### 3.3 Event 5 (CEC trial)

Whilst previous open days within the CEC trials were held with residents of the community in order to get an unbiased and realistic insight into trial interventions, preferred messaging approaches and planning; event 5 was purposefully held specifically with the core community members most engaged in driving the CEC trials agenda. The format of this event was to first show a 10 minute video put together by NEL summarising the trial's journey so far and the key lessons learned. The intention was this should act as a means of validating NEL's interpretation of the process to date and a prompt for initial conversations around how the trials had been led up until the start of TP3, leading into discussions around the benefits of this engagement and how they might be sustained. Ultimately the event allowed for an initial vision of how the communities would like to see themselves a year on from the trial providing both direction and preliminary benchmarking for open day 10, scheduled for winter 2018 (see section 2.4).

#### Format

The video shown in each community summarised six key learning outcomes from the CEC trials, building on those areas presented at open days 3 and 4 (see Table 4). A summary of each of these learning themes presented at event 5 is displayed in Table 6 below:

**Table 6 CEC video summary**

Theme	Description
<b>Earning the right</b>	Describing initial engagement activities; NEL note how by talking to as many organisations, groups, leaders and opinion forums as could be engaged within each community to discover their aspirations, as well as empowering local residents to deliver them; earned the community coaches the right to talk about the SAVE project's agendas. This included a distinctive local strategy for each community linked in to the agenda of demand reduction. As research progressed and relationships strengthened by helping the community achieve their aspirations, the coaches have been able to deliver SAVE's own research interventions in parallel.
<b>The trusted messenger</b>	Locally developed branding of 'Connecting Kings Worthy' and 'Shirley Warren Working Together' was created in order to deliver messages to the community. In comparing the response rates between DNO branded engagement and locally branded engagement the CEC trials found that DNO branded engagement achieved an approximately 10% response

	rate, whilst local branding achieved a response rate of over 50%.
<b>The key messages</b>	The trials looked to pin down what messages best achieve a DNO's objectives. Preliminary work on the CEC trials showed how 'typical' messages around saving the money/environment were seen as divisive/tired. Qualitative evidence shows the message of support your community as a wider collective means of engagement received strong support from those engaged.
<b>Energy literacy</b>	Early engagement suggested that attitudes to energy usage were largely linked to negative connotations. Through discussing instead the positives around shifting demand and social priorities people became more engaged.  As a result of this work the need was identified to 'learn a different language' with regards energy efficiency. Factsheets were put together by NEL using learning from trials and an understanding that information needs to be simple and relatable. These factsheets can be seen in Appendix F- CEC trial factsheets.
<b>The big ticket items</b>	Specifically linked to energy literacy people found messaging around avoiding peak more compelling than tired messages around cutting consumption. In order to support this people wanted to understand which items had the largest impact on the network if used at peak time (see sheet 3 in Appendix F- CEC trial factsheets).  The only area inflexibility was noted was cooking. Further research found however if presented in a different way to show the value of change in other terms, notably saving time, and the means to do this (batch cooking, slow cooking, prep. prior to peak time) people became more engaged (especially in the rural/affluent community).
<b>Creating the habit</b>	The example of recycling is clear in people's minds with regards habit around sustainability. Delving into the reasoning and means of creating this habit NEL found people recycle because they feel 'it's the right thing' and 'everyone else does'. The methodology devised therefore notes how in order to create this 'social norm' change needs to be collective within the community as opposed individual.

Both community groups thought these comments as a fair representation of lessons learned on the project (to date). It was also noted across both communities how conversations around energy related issues had become 'normalised' through the engagement works. In the rural, affluent community, Kings Worthy (KW), this was cited as a result of different local channels delivering messages on behalf of the community group (this was not limited to energy related messages but a broader theme

of sustainability). One attendee, a local Councillor noted *“of the 33 communities that I represent, Kings Worthy is the only area where issues of energy are visible and people are happy to engage in conversations around energy efficiency, peak demand and associated wider environmental issues.”*

Focusing on the urban less affluent community, Shirley Warren (SW), reasoning was more closely linked to energy literacy. It was felt here that people had a ‘new’ way of talking about energy, making it easy to understand and relate to (usual corporate language was cited as being too complicated, remote and needed simplification). Even before this however residents noted how; had the preliminary work not been completed to bring Shirley Warren’s residents together then engagement would likely be minimal, instead by addressing more locally sensitive issues (i.e. addressing litter, helping interact with local councillors/funding mechanisms etc.) NEL had ‘earned the right’ to talk about energy. Closely related, and also noted in Kings Worthy, it was discussed how the local branding created had become well-recognised, specifically through the work to engage the community on their priorities/local initiatives; as well as energy.

## **Outcomes**

This section splits out each community’s wider visions around sustaining benefits and creating a vision for the future within SW and KW. These areas will be revisited at open day 10 in winter 2018 (see section 2.4).

### Urban Less Affluent (Shirley Warren)

Within the urban less affluent community, the local group has been formed effectively from scratch by NEL’s community engagement work. The group expressed a strong desire to maintain the brand developed through the project’s intervention, continuing to provide services and activities to the wider community. Examples of legacy benefits cited included; community clean ups (litter picks) and the development of a community cafe. Aligned to a more energy efficiency driven agenda the community noted a desire to focus on: community wide energy reduction events, education around peak shifting and how to do it ; and efficient cooking clubs (cooking is often cited as being an inflexible activity when discussing electricity shifting, by promoting the time-saving benefits of preparation and slow cookers this mind-set is seen to be shifting within the communities).

Throughout the project the community has built up plans for a community café in-front of a local action centre. This started with a temporary gazebo and has evolved into plans for a more permanent fitting with funding streams and expert support available, a headline ambition for the community would be to have this built with a sustainability focus to embrace energy issues. In order to continue to grow and promote ideas as well as integrating energy into wider community activities the group noted a desire for continued access to project materials such as information sheets and fridge magnets.

### Rural Affluent

Unlike in the urban less affluent community trials, the rural affluent community had a multitude of societal groups with whom the CEC trial could, at inception, engage. Whilst this made initial engagement easier it has the impact of potentially producing conflicting allegiances and priorities across the community. As a result deciding the 'owner' of the community brand was less straightforward. It was decided accordingly that this might best sit with the Parish Council allowing local community groups to request use of the branding for their own activities and protecting the branding's use from partisan or political purposes. The focus group also discussed the idea of expanding the brand through the surrounding towns/villages; however caution was raised around diluting focus.

The best way to manage legacy was determined a more structured and strategic approach than the other community, with a focus on developing a wider sustainable strategy for the village. It was determined this was a more workable approach than to try and formalise the community group that would require potential significant time considerations leading to competing priorities, for the community group members, with other local organisations.

### Summary

In addition to clarifying how different individuals within the communities' key groups perceived the project and its key learning points, focus group 5 has also shown initial insight into how a legacy might be built within a community. The key learning here is that approaches to legacy planning need be flexible and adaptable to different situations that may materialise in differing communities. Notably in the urban less affluent community where a lot of groundwork was needed to establish a community group the sense of ownership and ability to co-ordinate legacy planning within that group was greater. Opposing this with the rural affluent community, the draw of time associated with ownership of Connecting Kings Worthy by community members was seen as potentially onerous and resultantly establishing a more structured approach to ownership with the local Parish Council was deemed most beneficial (it should be noted here the importance of stakeholder engagement in ensuring the Parish Council could understand and visualise the benefits of such a legacy for their constituency in order to take-on ownership).

## **4 Recommendations and Learning Outcomes**

This section summarises some of the key recommendations and learning outcomes to come from the project's open days. These are split into two sections; event format and project learning.

### Event Format:

- Learning from open days 1 and 2 show that less formal engagement may encourage the general public to engage in a more relaxed fashion.
- Should time/cost allow, splitting open days 3 and 4 into two events provided the benefit of giving participants time to reflect and gain opinions of others in the household and friends.
- When carrying out engagement/open days with different communities, tailored engagement methods may need be adopted in each area to optimise and incentivise attendance.
- A video can give a novel and more engaging means of engaging an open day audience as opposed to written notes/information prior to the focus group.

### Project Learning

- Messaging needs to consider three key points: 1) how regular? To avoid annoying people 2) how complicated? People don't engage with things they've seen multiple times in the past or are seen as common sense, equally messages need to be concise and clear. 3) Tag lines. People note not remembering message specifics, more the general theme of the engagement.
- With regards to the household monitored trial groups (3 and 4), qualitative evidence suggests that postal engagement (especially wrapped in a stand-out i.e. pink, envelope to encourage opening) has a greater impact than online/e-mail. Nonetheless cost profiles attached to such engagement are significantly higher. Further analysis from TP2 and event days 7 and 8 will look to build on the cost-benefits of different engagement mechanisms.
- Event day engagement may need to be clearer in future trial windows to ensure all participants have visibility and hence means to change behavior.
- Both the data informed method of engagement and the CEC methodology note how stickers and fridge magnets which 'hang around the home' would be/were received positively.
- Suggestion of competitive trials was received positively. In the individual household monitored trials people noted that they would see value in how they compare to 'average'; meanwhile the community trials noted how it would be good to compete against other communities.
- Learning from all open days suggests a need not to tell people what to do, but instead/also how to do it. This point resonates even more strongly with 'shift' messaging than 'cut' messaging given the novel and less familiar nature of this messaging. CEC trials also suggest this learning should be locally focused avoiding a wide-spread 'corporate' feel and directed more to a personal/targeted style.
  - The CEC trials have found that through corporate DNO branded material sent to residents in their target communities an approximately 10% response rate was received. The same material branded locally by the trial groups however received an over 50% response rate.
- People like a catchy and memorable tag line i.e. "can it wait til after 8" to keep a message in their mind.
- The CEC trials note that energy usage in the home needs to be understandable and relatable. There is no point talking about kW/kWh as the majority of the population don't relate. In addition if information can be made graphical understanding can be even simpler. A simple example developed on the trials can be seen in Appendix F- CEC trial factsheets, sheet 3. This could be expanded/layered by including how this varies with different appliance ratings (i.e. A-G) or settings (i.e. washing at 30 or 40).
- The CEC trials have found that engaging households around the benefits of shifting cooking patterns through potential time savings as opposed to energy saving has a greater impact in changing people's behavior. An additional benefit to this can be sought by running community events with a 'cooking' theme that can then be linked to a time saving/energy saving message attracts far more attention than other themes trialed due to the universal interest from different members of the household in cooking/food. Note that an attention grabbing 'selling point' is needed to facilitate conversations was also noted by SSEN's New Thames Valley Vision (NTVV) project. The project's Low Carbon Community Advisory Centre noted key benefits of having eye-catching engagement mechanisms such as an electric vehicle.

- When looking at creating habit within the CEC trials people note how they don't waste recyclables, food, plastic bags etc. because these things are visible and attached to a sense of social conscience that facilitates habit. Should energy be more visible through perhaps smart meters/in home displays and/or community driven change to apply social pressure on shifting/reducing energy usage; habit may be more easily achieved.

## 5 References

- 1) Solent Achieving Value from Efficiency project bid document, Shewan, SSEPD, 2014.
- 2) SDRC 4: Create Commercial Energy Efficiency Measures, Edwards and Martin, SSEN, 2017.
- 3) SDRC 9.8C (2): NTVV Low Carbon Community Advisory Centre Evaluation, McNeil, Edwards and Koumparos, SSEN, 2016.

## 6 Appendix

### 6.1 Appendix A- Risk Register

Risk Description	Inherent							Risk Control/Mitigation Actions	Residual							Inherent Score	Residual Score
	Impact								Impact								
	st	hedule	putation	arning	vironent	ople	ellhood		st	hedule	putation	arning	vironent	ople	ellhood		
Workpackage 6- Knowledge Dissemination																	
Open day participants from different trial groups communicating with each other disrupting impact of interventions. I.e. one group realises another is getting paid for doing the same thing	1	1	2	2	1	1	3	Individual open days will be held with each trial group individually to ensure no cross-contamination across interventions	1	1	1	1	1	1	1	6	1
Open days impact the level of interaction from participants within future trial interventions i.e. the increased rate of engagement (outside of the trial interaction) skews a participants willingness to change their consumption habits	1	2	2	3	1	1	3	The numbers engaged for the open days should be minimal (<2% of trial population). Engagement should not look to provide any additional education to participants and should focus on investigating what did work in TP1	1	1	1	1	1	1	1	9	1
Open day participants become more aware of the wider structure of SAVE project (when trial periods occur, project outcomes etc.) impacting BaU replicability	1	2	2	2	1	1	2	The event will be tailored to leave the SAVE project very open to interpretation, questions around wider project structure will not divulge into 'trial windows' and may be answered individually as opposed in a group format	1	1	1	1	1	1	1	4	1
Recruitment for the event days is not possible or skewed to audiences with more leisure time	2	2	1	2	1	1	2	Event participation will be incentivised and participants sampled based upon geography and diverse socio-economic attributes. Over-representation of a particular demographic is not a significant issue given the small sample size would not be representative anyway	1	1	1	1	1	1	2	4	2

Only one of the organisational risks identified had an amber risk rating due to its potential impact on the wider project. Had the events been run with a significant proportion of a Trial Group's population (i.e. 100 people = 10%) the potential for noticeable spill over effects that could not be attributed to the trial interventions would be increased biasing the project results. This risk however was effectively mitigated through both limiting open day participant numbers and focusing engagement away from an informative and marketing approach to a more investigatory method.

**6.2 Appendix B- Open Day 1 and 2 Agendas**



Thank you for confirming your attendance at our first project open day.

This event will offer you and other participants in the SAVE project the opportunity to discuss the trials we've conducted so far and our future plans.

**When: 6-8pm, Wednesday 10th May**

**Where: University of Southampton Campus,  
Garden End (Building 38, Conference & Hospitality)**

Parking will be available on site. It is recommended that visitors use the pay and display parking (free after 5pm) marked on the attached map.

Alternately there are numerous Unilink buses that stop at 'Highfield Campus Interchange', see [www.unilinkbus.co.uk/page.shtml?pageid=942](http://www.unilinkbus.co.uk/page.shtml?pageid=942) for more details.

### **What's on the agenda?**

Meet the team and an introduction from Scottish & Southern Electricity Networks

*Please arrive at 5.45 for a 6pm start*

*Canapés, tea and coffee will be served throughout your arrival*

The SAVE project – so far

*Your opportunity to feedback on the trials to date and have another look at the materials that we sent out*

Decoding energy data

*Find out how, with your support, the University of Southampton are leading the way in using data to help build a more sustainable future*

Break – an opportunity to ask us questions

*Tea and coffee*

What's next?

*We want to hear your thoughts on our plans for the next phase of the trial which will take place this winter*

The event will finish by 8pm at the latest

*With a £30 voucher as a thanks for coming along*

Should you have any queries on the day please contact:



Thank you for confirming your attendance at our first project open day.

This event will offer you and other participants in the SAVE project the opportunity to discuss the trials we've conducted so far and our future plans.

**When: 5.30-7.30pm, Thursday 11th May**

**Where: University of Southampton Campus,  
Hartley Suite (Building 38, Conference & Hospitality)**

Parking will be available on site. It is recommended that visitors use the pay and display parking (free after 5pm) marked on the attached map.

Alternately there are numerous Unilink buses that stop at 'Highfield Campus Interchange', see [www.unilinkbus.co.uk/page.shtml?pageid=942](http://www.unilinkbus.co.uk/page.shtml?pageid=942) for more details.

### **What's on the agenda?**

Meet the team and an introduction from Scottish & Southern Electricity Networks

*Please arrive at 5.15 for a 5.30 start*

*Canapés, tea and coffee will be served throughout your arrival*

The SAVE project – so far

*Your opportunity to feedback on the trials to date and have another look at the materials that we sent out*

Decoding energy data

*Find out how, with your support, the University of Southampton are leading the way in using data to help build a more sustainable future*

Break – an opportunity to ask us questions

*Tea and coffee*

What's next?

*We want to hear your thoughts on our plans for the next phase of the trial which will take place this winter*

The event will finish by 7.30pm at the latest

*With a £30 voucher as a thanks for coming along*

Should you have any queries on the day please contact:

**6.3 Appendix C- Open day 1 and 2 Content**

# SSEN Innovation

## SAVE Project

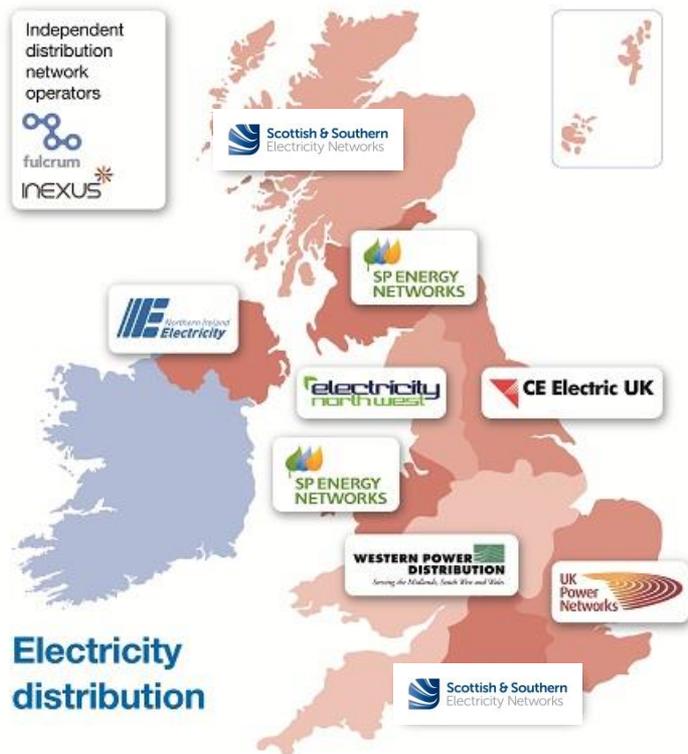


**Alex Howison**  
Innovation Programme Delivery Manager  
Scottish and Southern Electricity Networks



**Scottish & Southern**  
Electricity Networks

# Scottish and Southern Electricity Networks



We own

- one electricity transmission network
- two electricity distribution networks

106,000 substations

128,000 km of circuit

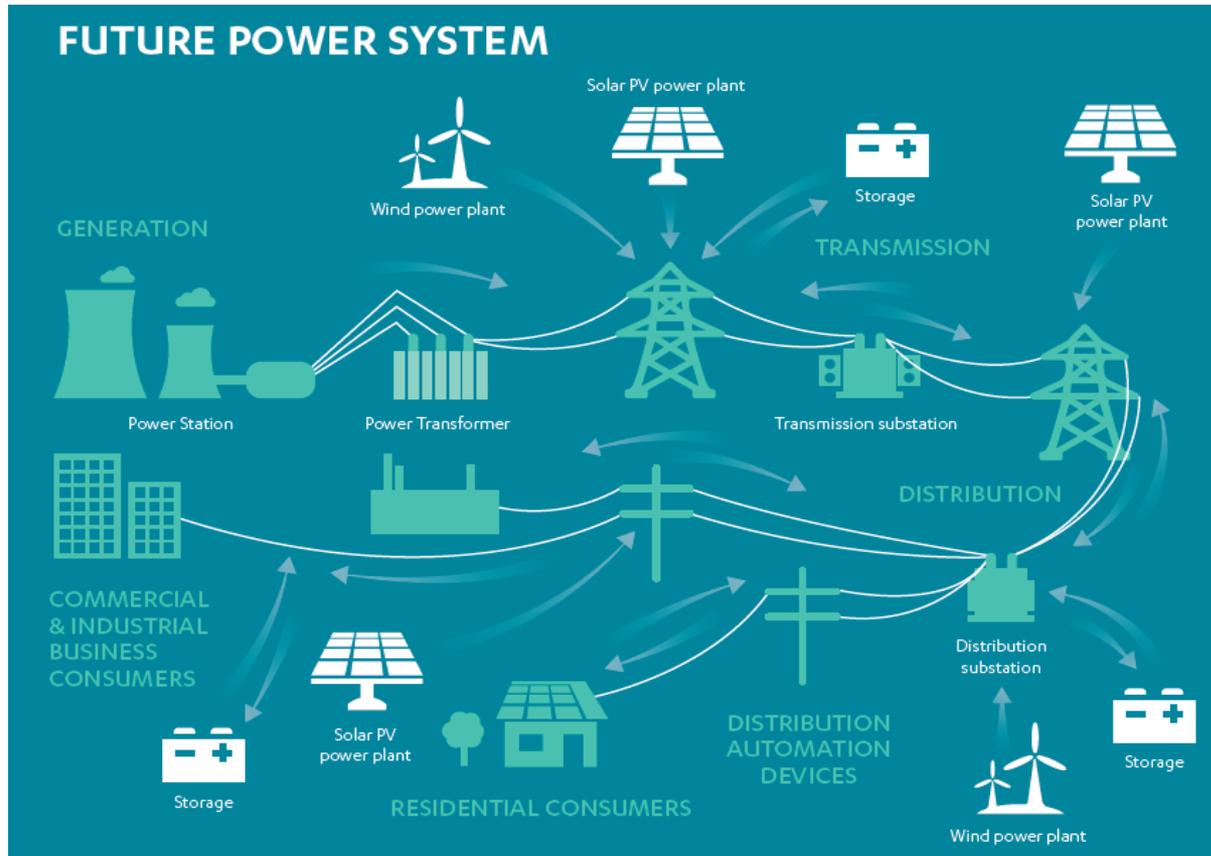
100+ submarine cable links

across one third of the UK landmass.

Serving 3.5 million customers

# Opportunity

Increasing need for flexibility driven by changing requirements



# Challenges for Electricity Distribution Networks



# Challenges for Electricity Distribution Networks

- ➡ Changing demand profiles
- ➡ Increasing demand across networks
- ➡ Increasing pressure on our industry to reduce costs
- ➡ Typical LV reinforcement projects  
= £80,000 - £250,000



# Distribution project portfolio

## Reliability & Availability

Connections & Capacity

				
<p>Shetland 1MW Battery</p>	<p>LV Network Monitoring</p>	<p>Impact of Electrolysers on the Network</p>	<p>ACCESS (Community Energy)</p>	<p>Orkney Energy Storage Park</p>
<p>LV Connected Energy Storage</p>	<p>Digital Substation Platform</p>	<p>Domestic Demand Side Management</p>	<p>Network Damage Reporter</p>	<p>Field Team Support Tool</p>

Customer & Social Obligations

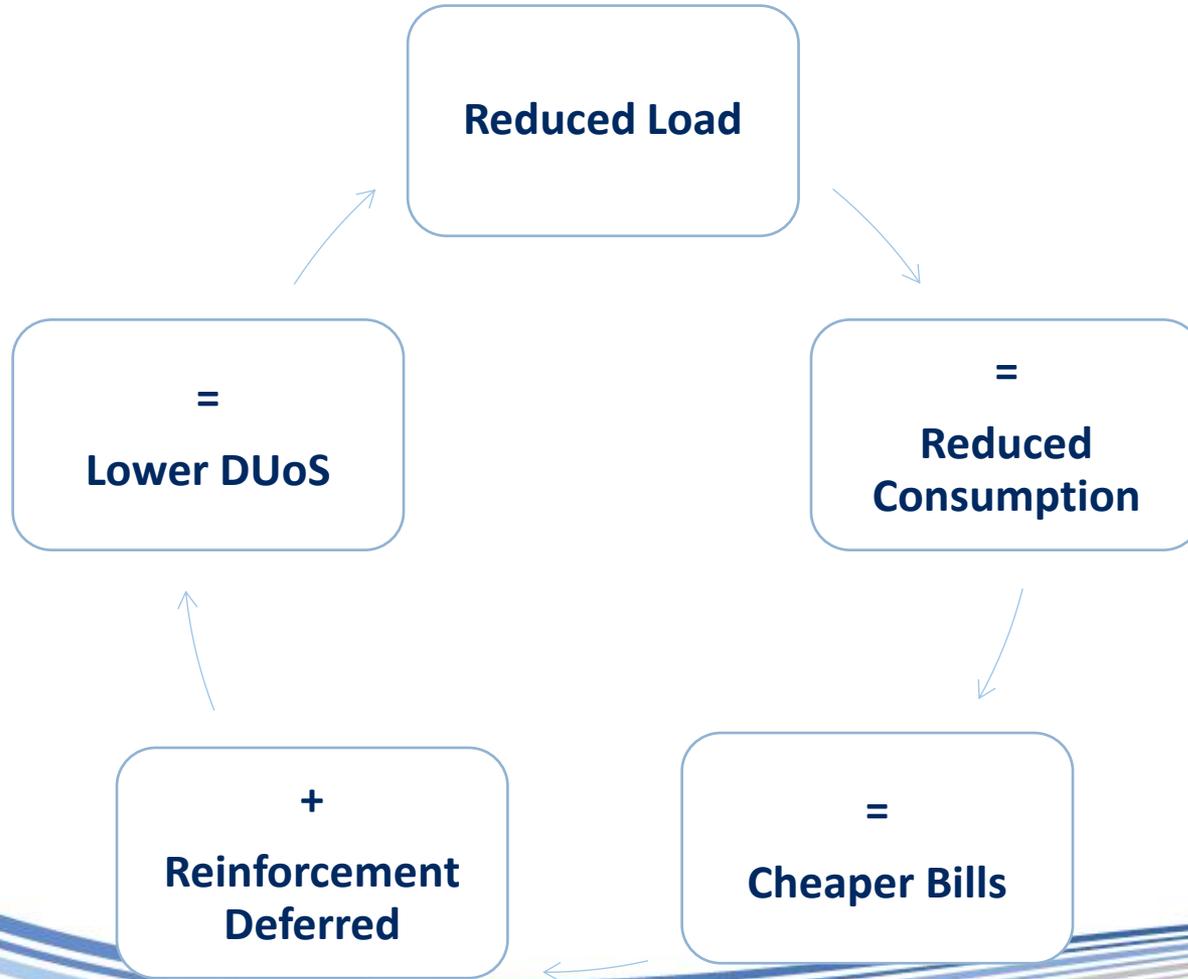
## Safety, Health & Environment

# Solent Achieving Value from Efficiency



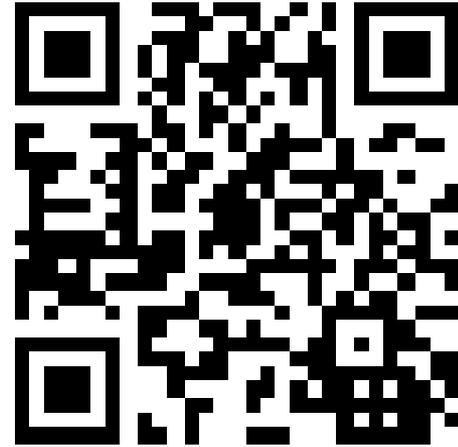
- Based in the Solent and surrounding area of Southern England
- Started in January 2014
- £9.4m Project
- Will involve up to 8000 domestic customers

# Exceeding Social Obligations



Symbiosis between Network Constraint solution, meeting DNO Social Obligations and enabling customer-centric benefits

Thank you



<https://www.ssen.co.uk/Innovation/>



# Decoding the SAVE project data

Tom Rushby  
t.w.rushby@soton.ac.uk  
@tom\_Rushby

Ben Anderson  
b.anderson@soton.ac.uk  
@dataknut

# Menu

- Data collection
  - Loop data journey
  - What else are we collecting?
  - Constructing the dataset
- Exploring the data
  - Time as a lens
- What next?



Image (modified): 'matrix' by  
Gamaliel Espinoza Macedo  
<https://www.flickr.com/photos/gamikun/>

# Menu

- Data collection
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  - Constructing the dataset
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- What next?



Image (modified): 'matrix' by  
Gamaliel Espinoza Macedo  
<https://www.flickr.com/photos/gamikun/>

# Data collection

- Loop data journey (1)



Photos by Patrick James | [p.a.james@soton.ac.uk](mailto:p.a.james@soton.ac.uk) | [@pab\\_james](https://twitter.com/pab_james)

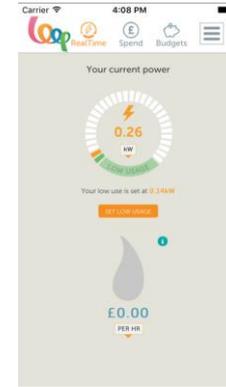
# Data collection

- Loop data journey (2)



# Data collection

- Loop data journey (3)

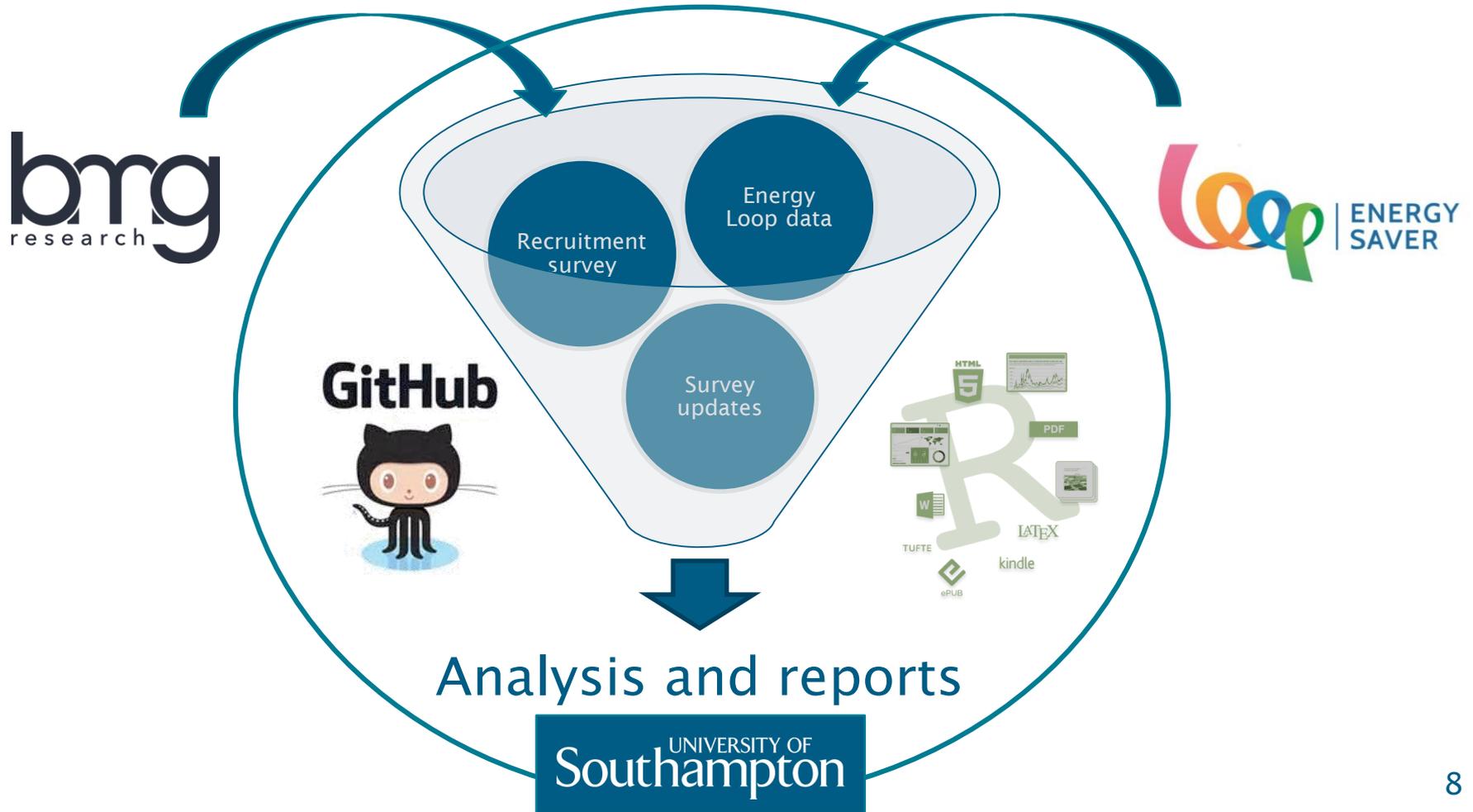


# Data collection

- What are we collecting? Presenting today?



# Constructing the dataset



# Constructing the dataset

## ▪ How much data?

Meter Clamps (4,318 households)

15 minute consumption (Wh) → 414,000  
records/day → 130 Mb/week

10 second power (W) → 37m records/day  
→ 11 Gb/week

Collecting for ~3 years

June 2016 – June 2019

The data we present today . . . . .

# Menu

- Data collection
  - Loop data journey
  - What else are we collecting?
  - Constructing the dataset
- Exploring the data
  - Time as a lens
- What next?

# Exploring the data

- We use different time scales as a lens to reveal patterns in consumption

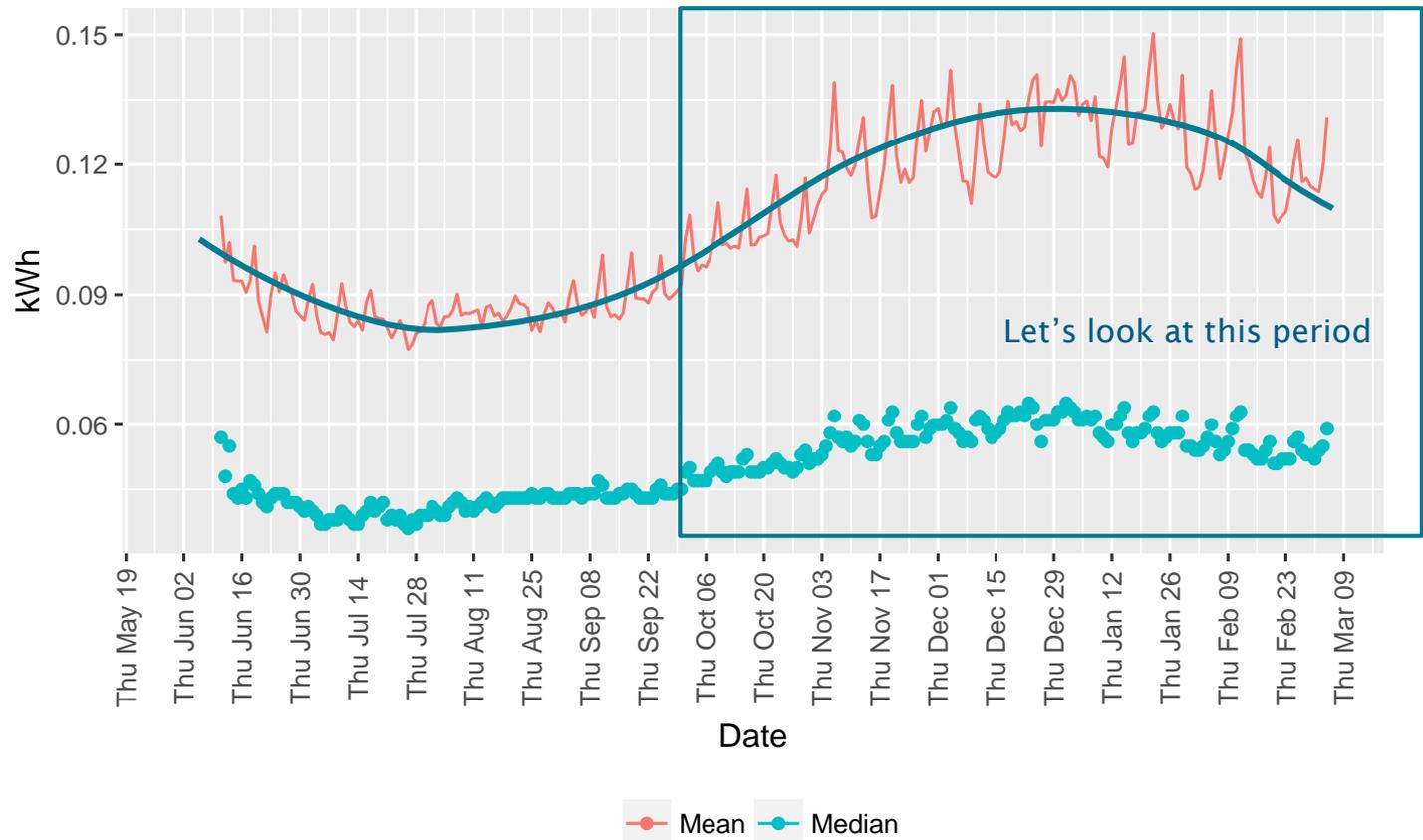
We will look at electricity consumption over:

- Months
- Weeks
- Hours



# Exploring the data

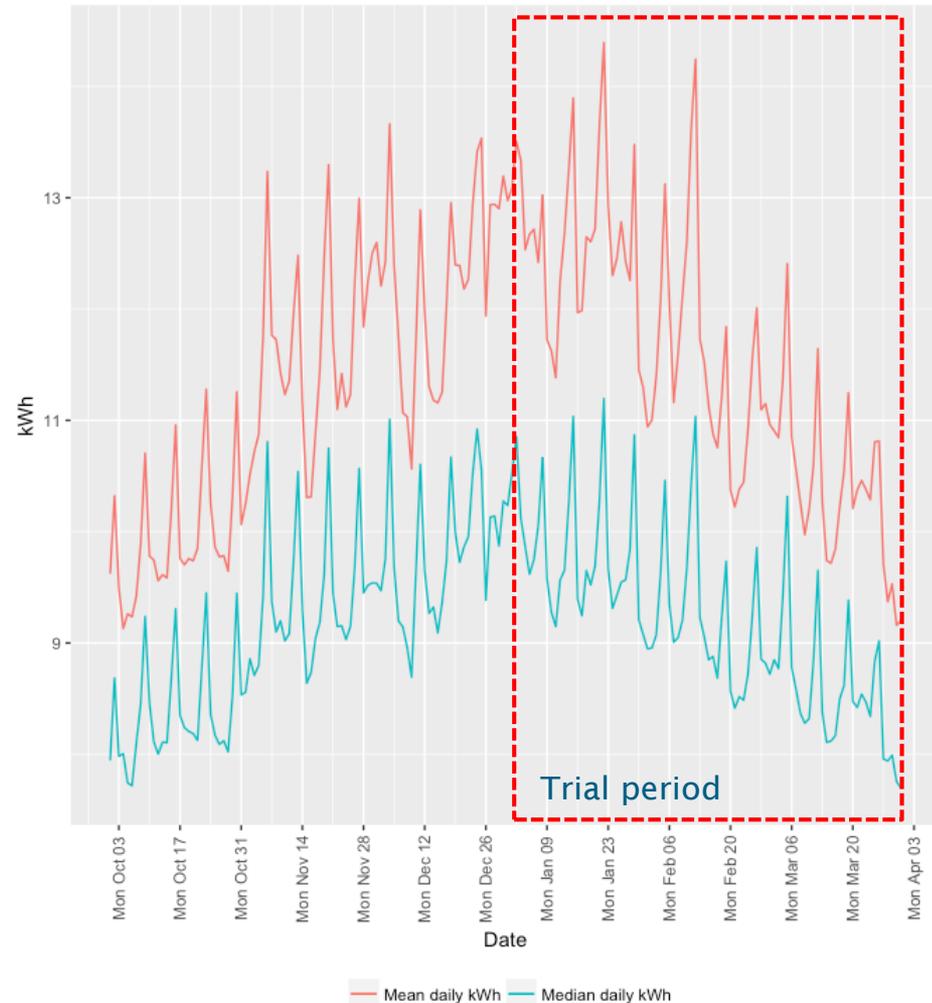
Timescale = < Year (June to March)



# Exploring the data

Timescale = Months

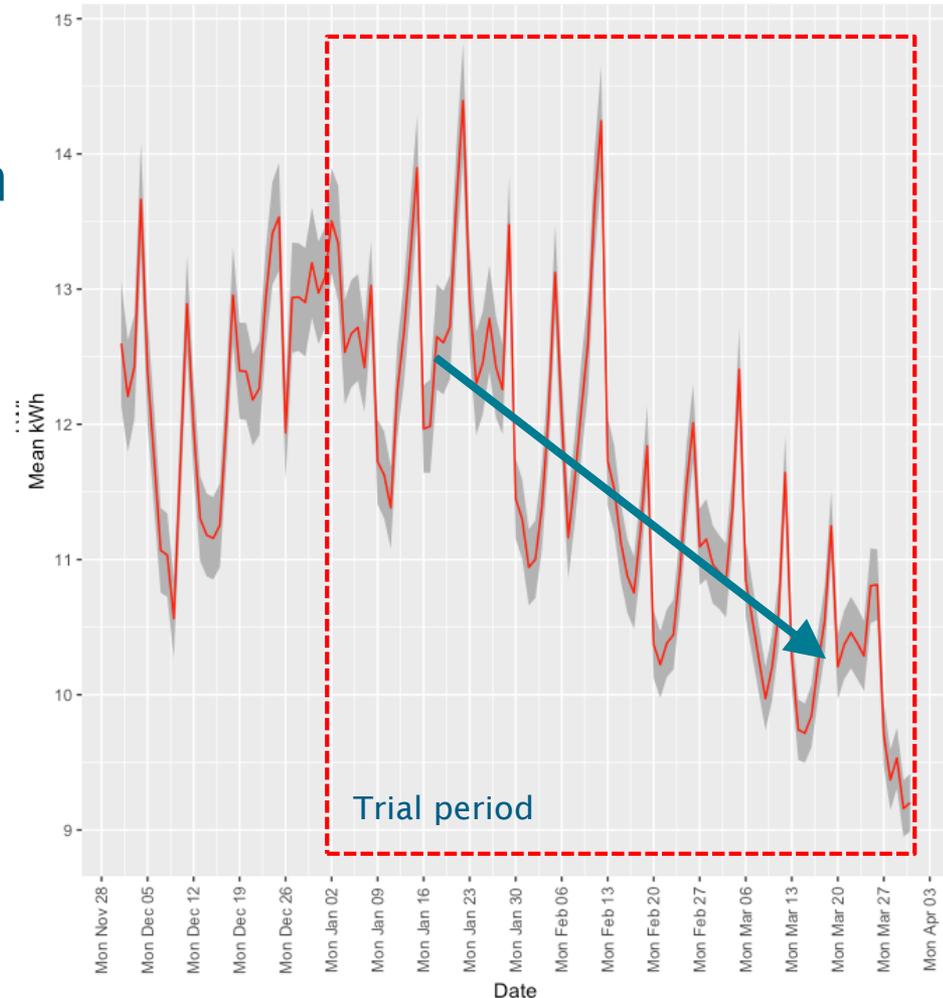
- October to March
- Seasonal effect
- Winter peak



# Exploring the data

Timescale = Months

- December to March
- Seasonal effect
- General spring reduction during trial period

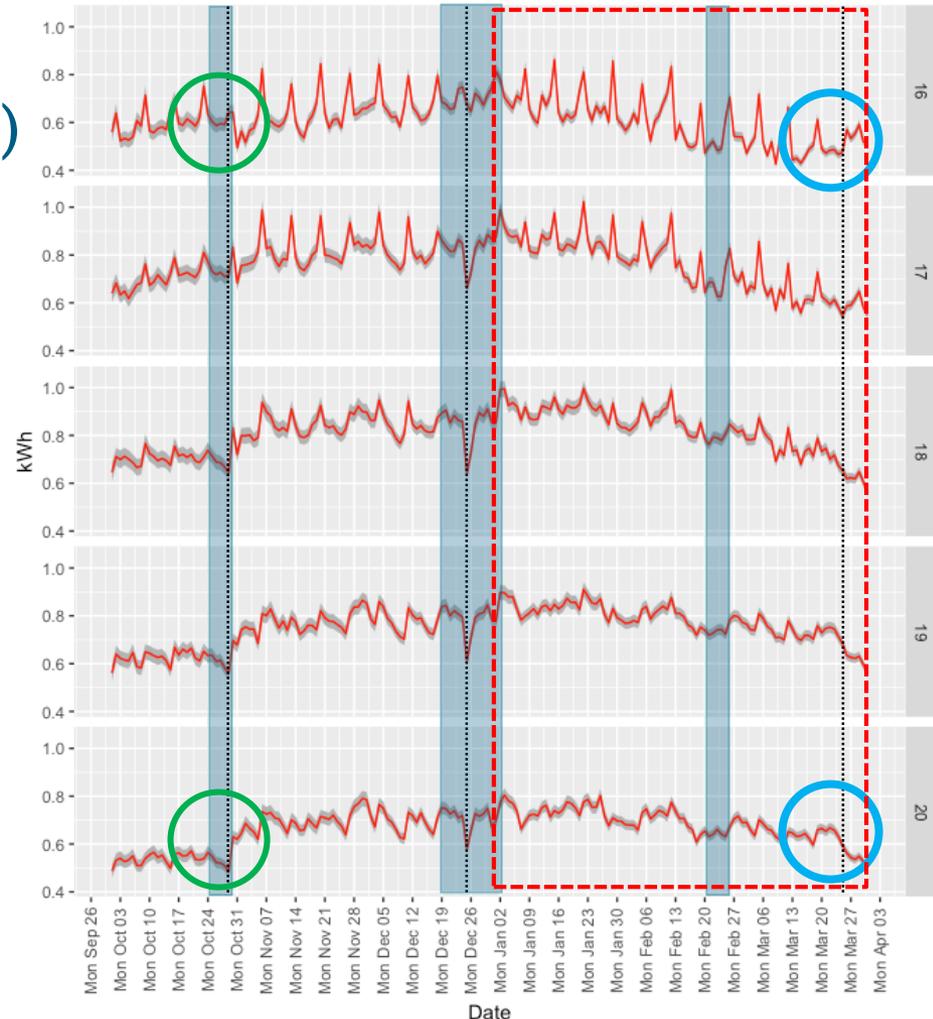


SAVE project 15 minute Wh data (2016-12-01 to 2017-03-31)  
Ribbon = +/- 95% CI assuming normality

# Exploring the data

Timescale = Months  
(hours of evening peak)

- Sunday spikes
- Events/holidays
- Christmas day
- Clock changes

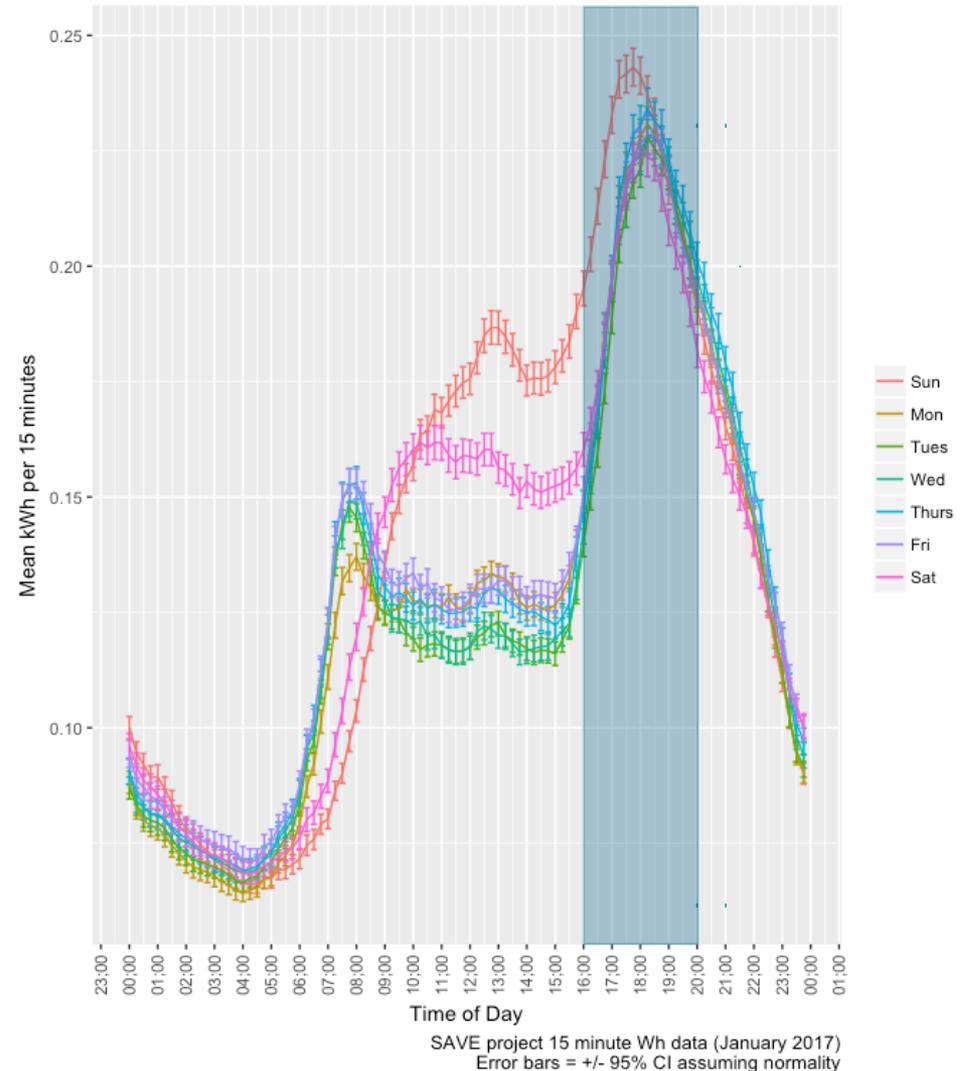


SAVE project 15 minute Wh data (2016-12-01 to 2017-03-31)

# Exploring the data

Timescale = 24 hours

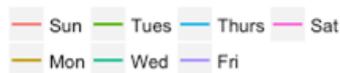
- Evening peak
- Morning peak (weekdays only)
- Higher weekend daytime consumption
- Higher and earlier peak on Sunday
- Weekend lie-in (and Mondays!)



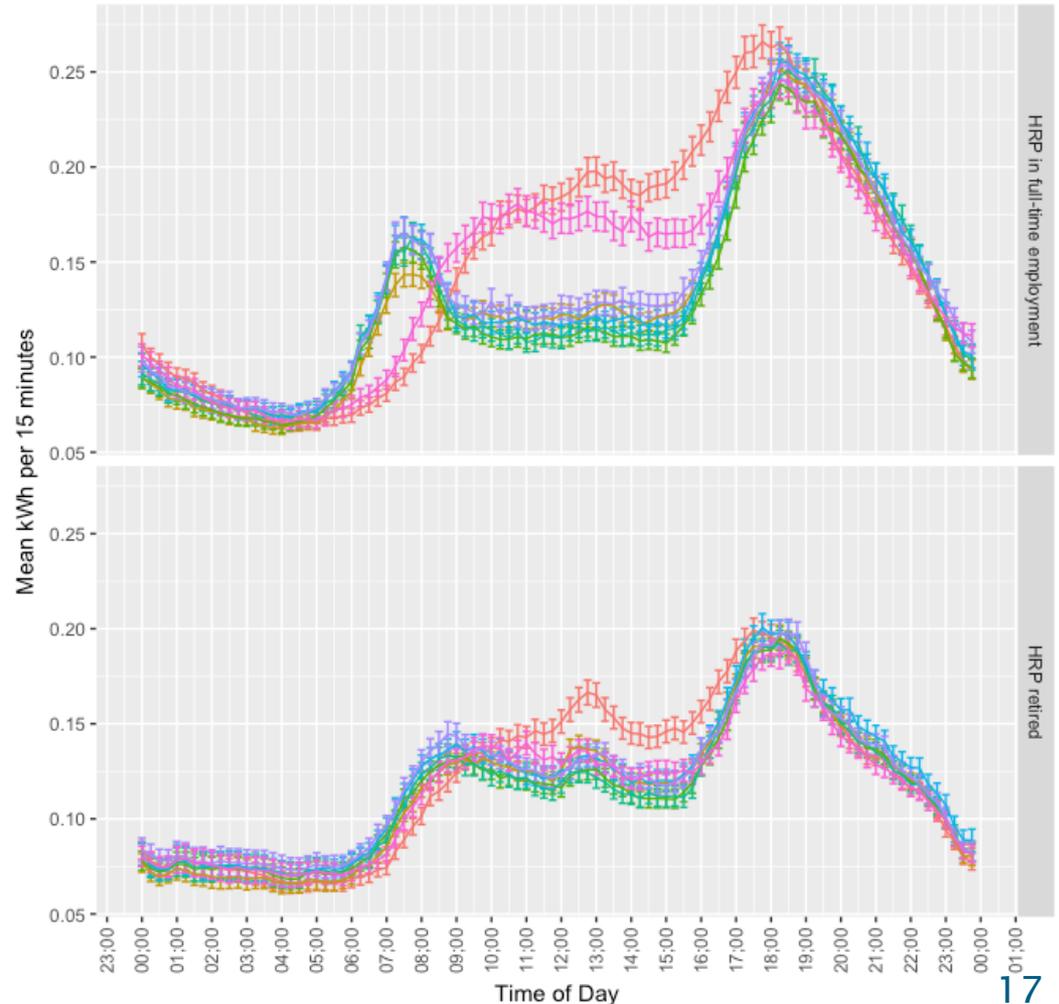
# Exploring the data

Timescale = 24 hours

- Households with different routines
- Morning peak
- Weekday/weekend differences



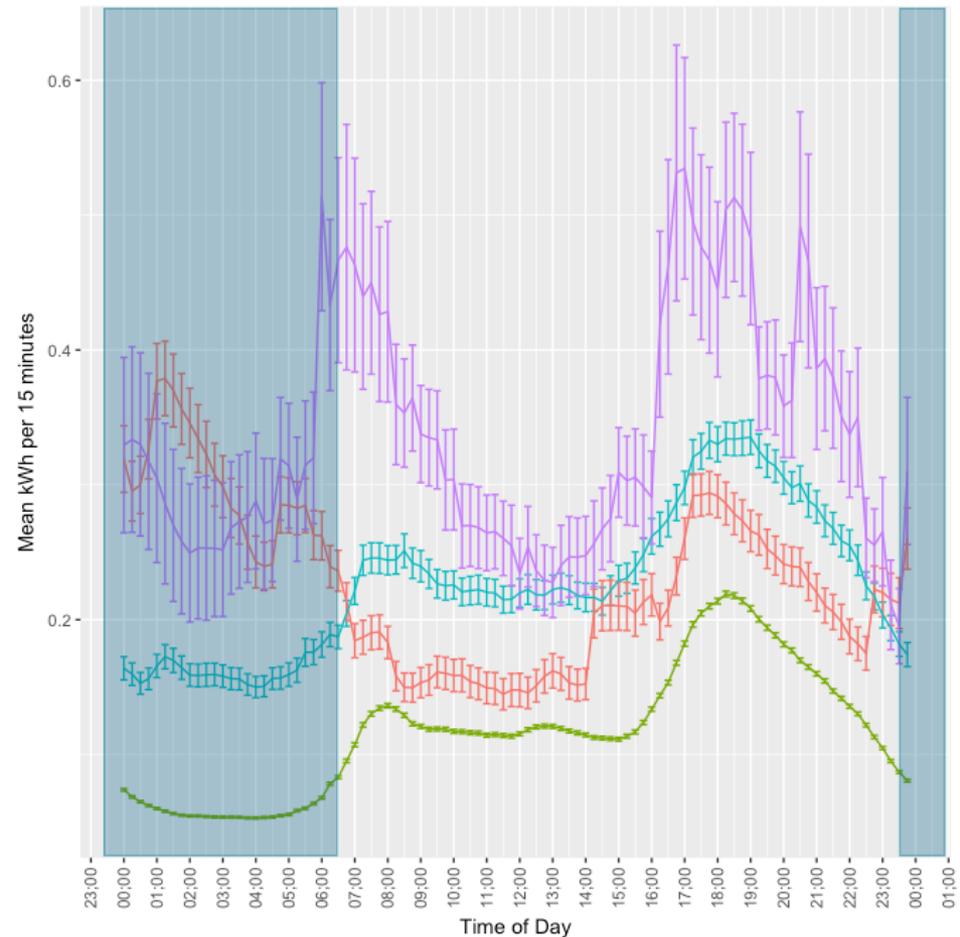
SAVE project 15 minute Wh data (January 2017)  
Error bars = +/- 95% CI assuming normality



# Exploring the data

Timescale = 24 hours

- Households with different heating systems
- Storage heaters night-time peak



Electricity - storage heaters Gas boiler Oil/wood/solid fuels/biomass/other Other electricity e.g. ground source h

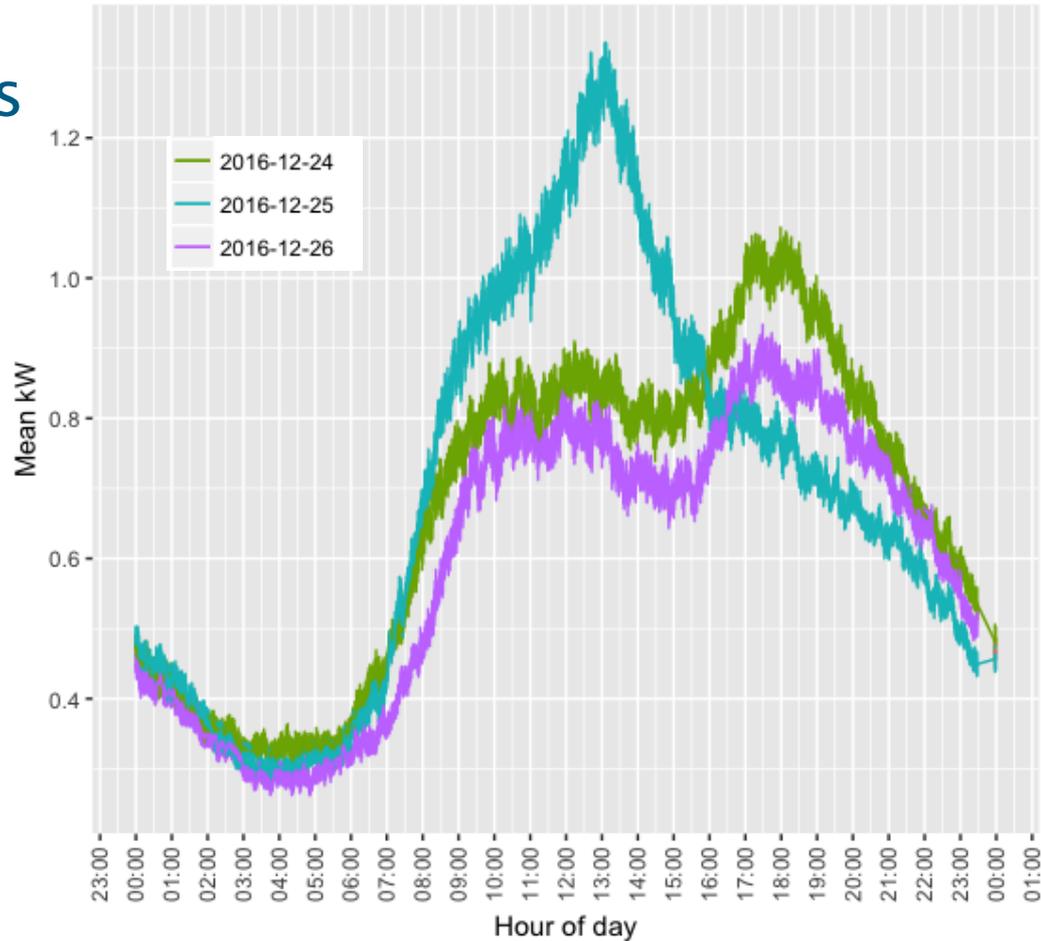
SAVE project 15 minute Wh data (January 2017)  
Error bars = +/- 95% CI assuming normality

# Exploring the data

Timescale = 24 hours

Christmas Eve to  
Boxing Day

10 second power  
data averaged  
over 1 minute  
intervals



SAVE 10 second data files  
2016-12-23 23:58:31 - 2016-12-26 23:28:26  
Total number of clamps seen: 3,008  
Error bars = 95% CI for the mean

# Menu

- Data collection
  - Loop data journey
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- What next?

# What next?

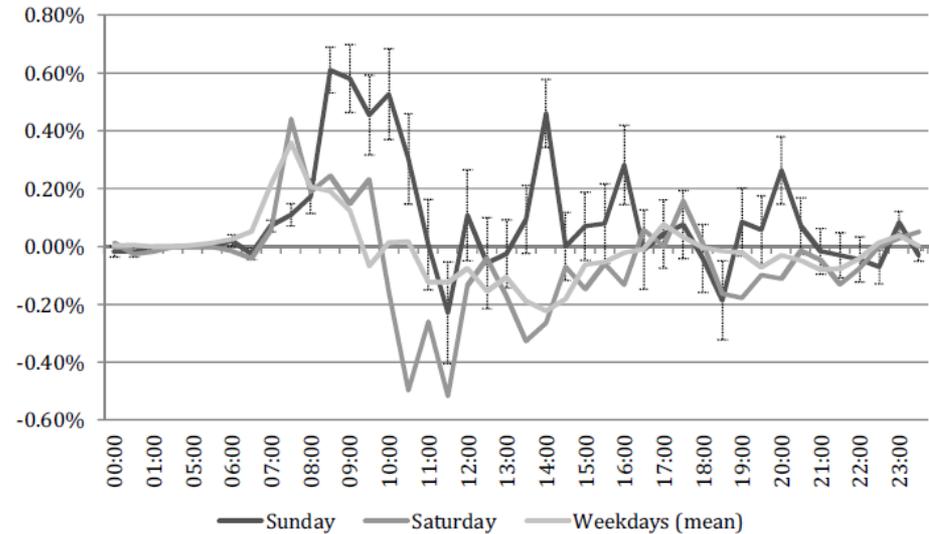
## More analysis to understand:

- how households respond to different incentives across time
- the characteristics of those who respond in the same way

# What next?

## More data!

Using time-use data to better understand changes in energy using practices or routines



% point change in timing of reported laundry by weekday vs weekend and by time of day for each year (MTUS UK sub-sample weighted, for clarity, only 95% confidence intervals for Sunday included).

# Thank you for listening.

Tom Rushby [t.w.rushby@soton.ac.uk](mailto:t.w.rushby@soton.ac.uk) @tom\_Rushby

Ben Anderson [b.anderson@soton.ac.uk](mailto:b.anderson@soton.ac.uk) @dataknut

## 6.4 Appendix D- CEC Event Invitation



**'Connecting Kings Worthy' is a community-based organisation aiming to make connections within the community:**

- ✓ connections between people
- ✓ connections between places
- ✓ connections with energy



**FOCUS GROUP OPPORTUNITY**

We are looking for a number of local families willing to speak to our research team about how we can work together to reduce energy consumption – especially at peak times. Feedback from residents is crucial to us. If you are interested in helping, please get in touch with us on 01962 827083 (ask for Alison) or at <http://www.connectingkingsworthy.org.uk/contact/>

Participants will be eligible to receive shopping vouchers to the value of £30

**THANK YOU!**



**Together we can make a difference!**





'Shirley Warren Working Together' is a new community-led organisation aiming to:

- ✓ give our community a voice
- ✓ improve facilities and services
- ✓ use less energy and save money



Tuesday 1<sup>st</sup> August 2017

## CHEESE & WINE

Drop in Anytime from 7 - 9 pm

At the Shirley Warren Action Centre, 107-117 Warren Crescent,  
Shirley Warren SO16 6AY

This is an opportunity for local residents to meet our research team and tell us how you think the area can be improved and how we can work together to reduce energy consumption – especially at peak times. Feedback from residents is crucial to us. Please come along.

**WE NEED YOUR HELP!**



Together we can make a difference!



**6.5 Appendix E- Direction of CEC TP3**

# SAVE

Solent Achieving Value from Efficiency

## Coaching Trial

### Ingredients of TP3 Design

Stakeholder Group  
September 2017



# Formal Trial Periods

2016				2017			
JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND
TP1							
			TP2.0	TP2.5			
						●	TP3



# Scope of Research

Key driver for change	planet
	money
Key message	shift
	cut
Greatest messenger traction	DNO
	local
Normal behaviour	transactional
	cultural
Wider BAU integration	single issue
	multi-agency
Community-led change	add-on
	new innovation
Balance between ideas and numbers	quantitative
	qualitative



# Driver: *planet or money*

- *Not straightforward / more complex - no conclusive result (baseline survey)*
- *Assumed distinction between KW / SW but ... not clearly predictable (TP2 door-knock feedback)*
- *Important to know potential savings of low energy lifestyle even if cost saving is not an incentive for change for every community (FGs)*
- ***Environmental issues potentially old hat and/or need a message refresh (FGs)***
- ***Generally, using one or other is divisive and using both is confusing (co-design)***
- *Other more novel drivers include 'support your network' / 'support your community' (co-design)*
- ***Idea of 'caring' community as a primary motivational platform – crucially 'the legacy we are leaving our children' (FGs)***
- *Gender related assumptions / stereotyping regarding (notably) 'money' and 'community' drivers (co-design and FGs)*

***TP3 design points:*** *creative material majors on collective community action on behalf of caring community. No explicit reference to 'planet' issues included. 'Money' referred to as subsidiary motivation on 'low energy' and 'peak demand' factsheets as part of community perspective.*

# Message: *shift or cut*

- Transition from 'cut' to 'shift' asks was a surprise (TP2 door-knock)
- **The basic energy efficiency /'cut' message is well understood, but 'Can it wait til after 8?' seen as novel, simple and relatively more compelling (FGs)**
- 'Shift' does not relate directly to 'money' or 'planet' drivers - link aspiration for peak reduction to low energy lifestyle, allowing a nod to both (FGs)
- Mixed reaction to the 'support your network' driver as a basis for shift – polarisation according to outage experience (FGs)
- **Energy literacy as a key concept underpinning propensity and capacity to change – need a new peak reduction 'language' (throughout)**
- Give people the means to act according to the message they choose to hear – eg new cooking recipes which embody new thinking rather than telling people not to cook (co-design/events/FGs)
- **Priority actions (eg 'washing' or 'cooking') need a clear, simple message and an understanding of the (stereotypical) recipient (co-design/FGs)**

**TP3 design points:** clear reference in material to peak issues but not directly to either 'shift' or 'cut', the message being about using less energy on community network between 4-8pm. The 'after 8' tag is not up front to avoid confusion with the 6-7pm BSO hour. Factsheets are a deliberate response to identified 'literacy' issues.

# Messenger: *DNO or local*

- ***SSEN branded engagement message – response of 6% and 20% for SW and KW respectively (TP2 baseline response test)***
- ***Equivalent response rates for DDS branded test messaging – 51% and 58% (TP2 door-knock sample)***
- *Feel good factor associated with embedded DDS impacts in both communities - still engaging people 2 years on (co-design/FGs)*
- *Little remaining doubt that a ‘manufactured’ community brand could naturally accommodate the energy usage agenda (co-design/FGs)*
- *Persistent mistrust in standalone DNO conversations even when linked to positive social obligations (PSR survey/FGs)*
- ***SW residents expressing surprise at being ‘treated as equals’ (co-design)***
- *Capacity to accommodate wider range of related (potentially reinforcing) issues under local branding – embraces multiple community and stakeholder interests (co-design/FGs)*

**TP3 design points:** *SSEN is not referred to specifically other than in the small print, the emphasis being wholly upon the established local brands. The interventions are also part of a conscious effort to embed local branding still further through the ‘caring’ theme, the implication being that BSO/LBC is just the beginning.*

# Normal: *transactional or cultural*

- ***Need to counter perception that the DNO can pay for behaviour change through variable tariffs – even if this were possible the value of the ‘money’ driver is not assured and could raise issues of ‘fairness’ – positive impact is likely to erode over time anyway (co-design/FGs)***
- *The potential win/win transaction around ‘support your network’ receives a mixed (inconclusive) response (FGs)*
- ***Potential parallel with recycling behaviour - now a habit, underpinned by embedded social norm(s), not necessarily a matter of personal principle (FGs)***
- *Accordingly, can we identify a simple routine that, if it becomes a habit for most people, will have enough of an impact (FGs)*
- *Sense of collective effort is paramount – can’t change a community household by household (FGs)*
- ***In ‘embedding’ change, it is all the more important to be clear who in the household should be targeted for specific positive behaviours (FGs)***

**TP3 design points:** *interventions and related material will try to cover both, consciously promoting a move from one to the other. For example, transactional ‘win / win’ messages underpin the ‘low energy’ and ‘peak demand’ factsheets - with reference then to the creation of simple habits / routines for all.*

# BAU: *single issue or multi-agency*

- *Community-led DDS activity has naturally led to cross-over work reflecting the interests of other stakeholders as well as the DNO (throughout)*
- ***The idea of ‘caring’ community as a primary motivational platform presents an opportunity for ongoing delivery of DNO social obligations (throughout)***
- *Earlier work with SG on sustainability benchmarking too academic. The alternative ‘lighter touch’ Lightbulb Challenge themed programme potentially more accessible as a cross-cutting engagement tool for customer facing teams (co-design/FGs)*
- *The extended Lightbulb Community branding appears to have some traction as a potential legacy change-management platform worthy of further business case examination. Care is needed to avoid over-riding other post-project place branding options coming through TP3 ‘convergence’ conversations (co-design/FGs)*
- *Building upon SG experience, there is recognition that agencies need to change (as well as communities) – this should be extended to central government looking holistically at energy and related consumer demand issues (co-design)*

**TP3 design points:** *‘caring community’ lends itself to cross-cutting involvement in most aspects of community life. As well as the immediate research focus upon demand reduction, TP3 interventions will hopefully serve to raise aspirations for change and recognition to improve community well-being as a legacy of SAVE.*

# Community-led change: **add-on or new**

- *In KW, the questions remains whether CKW can develop sufficient momentum for it to be more (post-project) than an add-on to the many organisational interests in the community. In SW, by contrast, we have necessarily facilitated the creation of a new community organisation dedicated to SWWT (co-design)*
- *The prognosis is good for work to continue in SW post-project to develop the proposed All-community Action Centre (co-design)*
- *While there is still opportunity to facilitate other innovations in local infrastructure related specifically to energy (eg community generation, energy bundling, energy services, best practice installation), this has been a challenge within the project timeframe (co-design)*
- ***While the Lightbulb Community idea, offers a platform for embedding change from the DNO viewpoint, the communities themselves may have better ideas for potential place branding – local ‘ownership’ is key. In any event, ‘caring community’ seems to be a common ‘integrating’ thread (co-design/FGs)***

**TP3 design points:** *the record to date through the project is good in terms of innovation in local activities / projects / leadership and organisational development – but we want more! Either the LBC can provide the catalyst or there are better ideas which will be identified over the next few months – which is all to the good.*

# Balance: quantitative or qualitative

- *The aspiration remains to balance ‘ideas’ and ‘numbers’ in the research trial. Given the issues with data monitoring, there is a need for both mitigating qualitative feedback and other means of quantifying impacts (co-design)*
- *The middle course approach is to clarify what is achievable using feeder monitoring data and strike the most effective balance between learning arising from both quantitative and qualitative tests (co-design)*
- ***The BIG Switch Off and Lightbulb Community Sign Up (adapted ‘Competitions’) Interventions will both headline on quantity of sign ups rather than quantity of demand reduction. Usage monitoring will continue in the background on the ‘hammer blow’ principle (co-design)***
- *The straightforward competitive element in TP3 is lost - although the relative level of sign ups per feeder could be a basis for neighbourhood level competition and achieving a target sign up level for BSO in SW could perceivably be linked to a contribution to the Community Café development fund*

**TP3 design points:** *usage monitoring is still to be undertaken but not presented locally as either a reason or a reward for participation. In the event that analysis is positive, we can always share more widely after the event. As distinct from TP2, the aim is to match usage behaviour at feeder level to recorded sign up rates.*

**6.6 Appendix F- CEC trial factsheets**

# FACTSHEET No 1

## How electricity reaches Kings Worthy

### Generation

Electricity is generated using a number of different energy sources ...

... coal, gas, nuclear and renewables.



### Transmission

Across the UK, there are 4 transmission networks to transport large amounts of electricity over long distances at high voltage.

The network for England is run by National Grid.

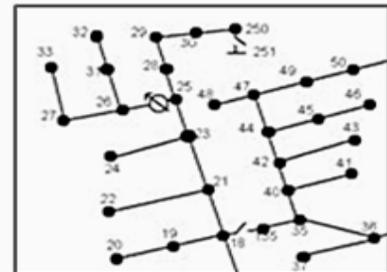


### Distribution

For each UK region, one company is appointed by the industry regulator (Ofgem) to manage the local distribution network of cables and substations. The cost of distribution accounts for about a quarter of our household bill.

For the South of England, the distribution network company is SSEN (Scottish and Southern Electricity Networks).

SSEN gets electricity to our door.



As individual customers, we then choose our supplier who connects our home to the network and sends us our bills.



Source: tEC / WinACC 2017

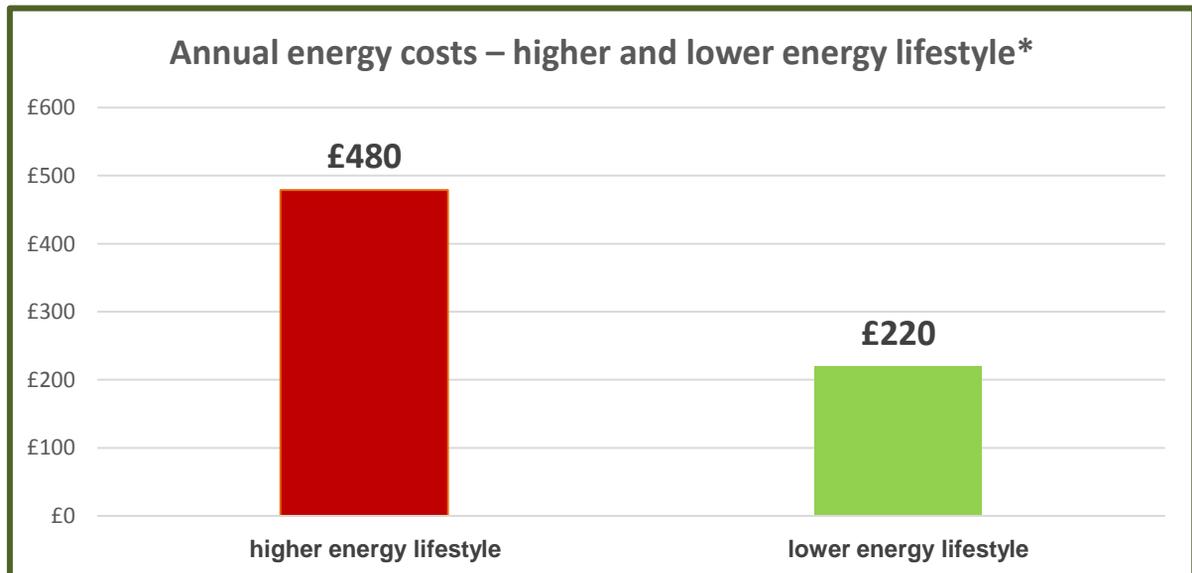


**FACTSHEET No 2****What is a 'lower energy' lifestyle?**

***Switching to a 'lower energy' lifestyle is not as hard as we might think. If we all adopted the following simple habits, the pressure we place on the community network would be vastly reduced. Amazingly, energy costs for an average household would also be cut in half!***

Some simple habits for a 'lower energy' lifestyle:

- Use a slow cooker twice a week instead of the oven (use the oven as normal on the other days)
- Use microwave and hob once a week instead of the oven
- Use a dishwasher on 'eco' instead of the standard cycle
- Reduce tumble drier use from 5 times to twice a week
- Wash at 30 instead of 40 degrees
- Swap from halogen to LED lightbulbs



\* Note: not including heating or non-electricity costs – Source: tEC / WinACC 2017



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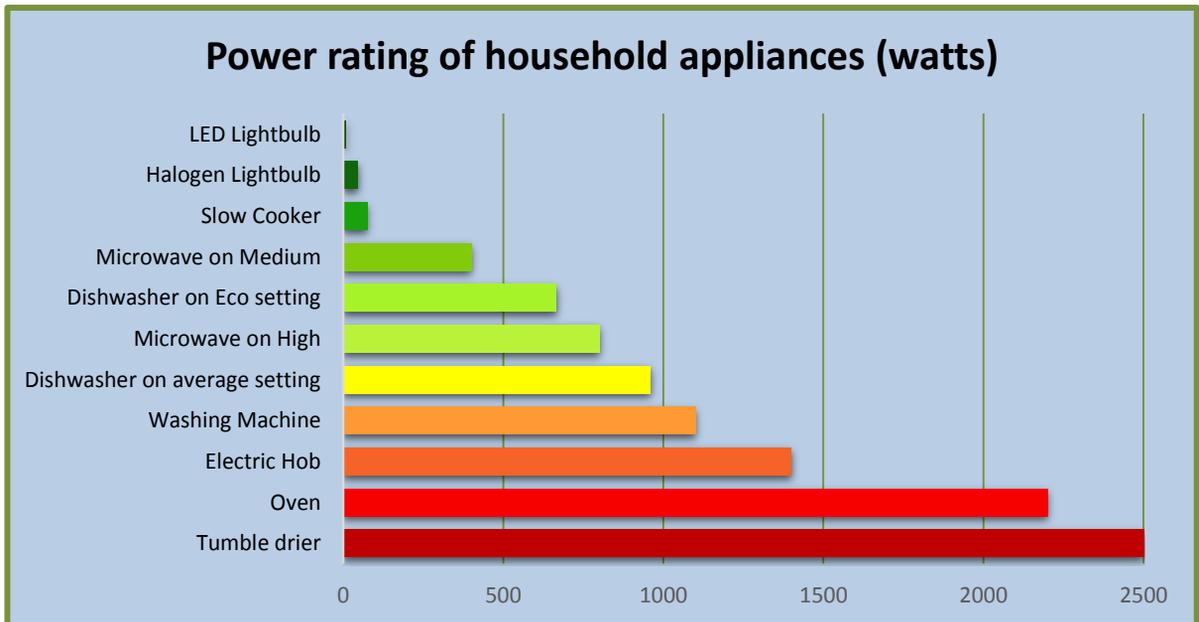


# FACTSHEET No 3

## Peak demand: 'Can it wait 'til after 8?'

***We've all been there! You get home, stick the kettle on, switch on the TV, charge up your mobile or laptop, start cooking a meal, put some washing in the machine ... but you may not know that peak demand for electricity is from 4pm to 8pm.***

By shifting some of our usage outside of this period, we can all do our bit to reduce pressure on the local community network. This should mean less disruptive and costly upgrade work. What's more, since getting electricity to our homes via the distribution network accounts for about a quarter of our household bill, a reduction in the amount of essential maintenance will help to reduce long-term price rises. So, it's a win / win!



Source: tEC / WinACC 2017

***Looking at the chart, you can see where the pressure points are!  
So, please ask yourself ... 'Can it wait 'til after 8?'***



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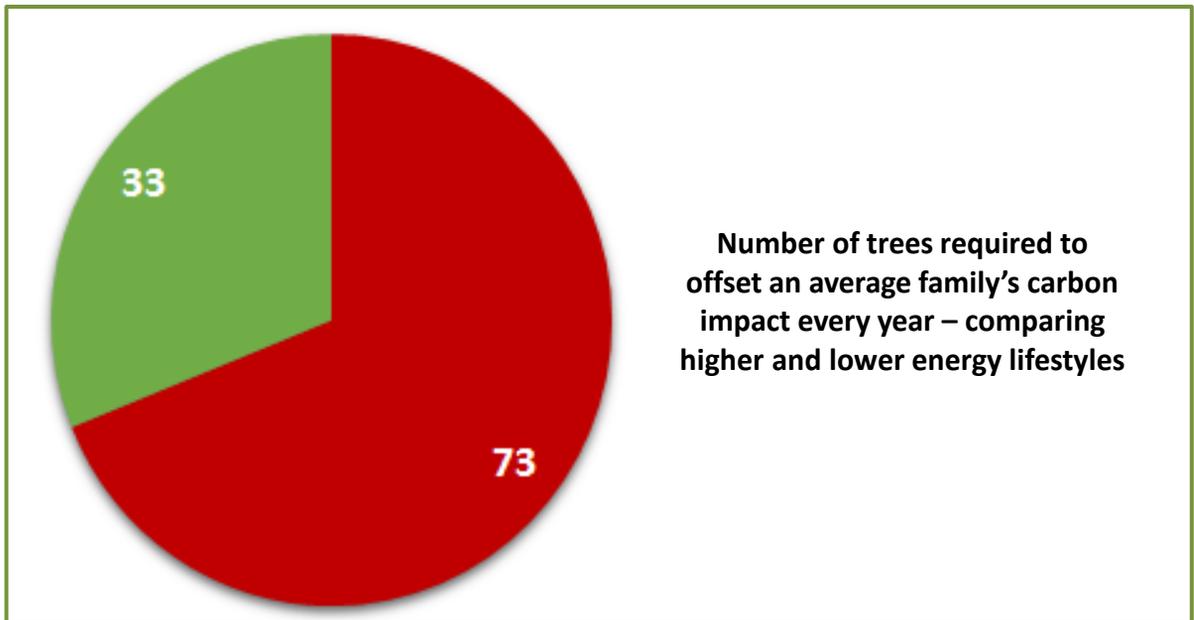
## FACTSHEET No 4

### Reducing our carbon impact

*Using energy from fossil fuels releases carbon dioxide, one of the 'greenhouse gases' associated with climate change – trees absorb carbon dioxide, so we can measure our 'carbon impact' by the number of trees required to offset the greenhouse gas produced.*

For an average household, switching to a 'lower energy' lifestyle\* means reducing our carbon impact from 73 to 33 trees every year! Adopting some simple 'lower energy' habits can make such a difference!

- Use a slow cooker twice a week instead of the oven (use the oven as normal on the other days)
- Use microwave and hob once a week instead of the oven
- Use a dishwasher on 'eco' instead of the standard cycle
- Reduce tumble drier use from 5 times to twice a week
- Wash at 30 instead of 40 degrees
- Swap from halogen to LED lightbulbs



\* Note: not including heating or non-electricity usage - Source: tEC / WinACC 2017



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## The Energy Mythbuster

***When it comes to use of energy in the home, it is difficult sometimes to distinguish between myth and reality. So here are a few pointers on some of the most frequently asked questions:***

### ***Which lightbulbs are best to use?***

Halogen bulbs are very expensive to run. The best bulbs are the new LEDs which light instantly, come with different shades of light and which cost on average £3 to buy and £1 per year to run compared to the old 100w bulb which cost 50p to buy and £12 per year to run

### ***Are electric night lights expensive to run?***

They vary of course but are generally low in consumption. LED versions are cheaply available and cost about 30p per year to run

### ***Is it cheaper to leave fluorescent lights on?***

Fluorescent lights have a starter to kick start them so use a little more to switch on but usually modern ones are low energy. Generally, if you are coming in and out of a room within 5 minutes then leave on, if you are out for longer turn off

### ***What uses the most energy in the home?***

Heating uses more energy than most things in your home. Try turning down the thermostat by 1 degree as this will save you money as well as use less energy – but remember don't be cold – 18-21 degrees is optimal, above is too warm and below too cold. Making sure your house is well insulated and draught proof will help to keep your house warm and help reduce usage and bills

### ***Is it better to leave your heating on low all day or just turn it on when you need it?***

This depends on how much you are at home during the day but generally better to have on for a half hour-hour or so in the morning before you get up/go out and the same in the evening

*continued ...*



**FACTSHEET No 5**

*...continued*

***Combi boilers v Economy 7 – what is the difference and how should you use them most effectively?***

Combi boilers run on gas and provide heating and hot water. They heat water as it is needed. The heating is best controlled with a programmer or a thermostat and timer. Economy 7 is an electricity tariff that costs less for 7 hours at night. It is usually paired with storage heaters and an electric immersion tank. Correct use of storage heaters makes best use of the tariff and keeps your home warm when you need it. Immersion heaters are best used on a timer

***Is it better to leave water heaters on all day or turn off and heat from cold each time?***

It depends on the type of system you have as combi boilers only heat water when it is needed, whilst immersion heaters are best used with a timer to ensure they are not left on for more than 1 hour or so each time

***Is it best to fill a kettle with cold water or warm water from the tap to use less money?***

Boiling a kettle uses a lot of energy but from a health point of view it is better to fill your kettle with cold water at the start as hot water has been circulating around your system for a while. You also need to heat the water up in the first place so will have used energy to do so. If you only fill the kettle with as much as you need you will save money and energy

***Does it use less energy to have a shower than a bath?***

It depends on what is heating the water, and also how much water is used. A shower running off the gas boiler will usually use less water than a bath, as long as times are reasonable. Some electric power showers can put out a huge amount of water, and consequently use a lot of energy. It is best not to use electric showers at peak time as they have a much higher power draw than all other household appliances. A 4 minute shower is the most efficient

Source: tEC / WinACC 2017



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