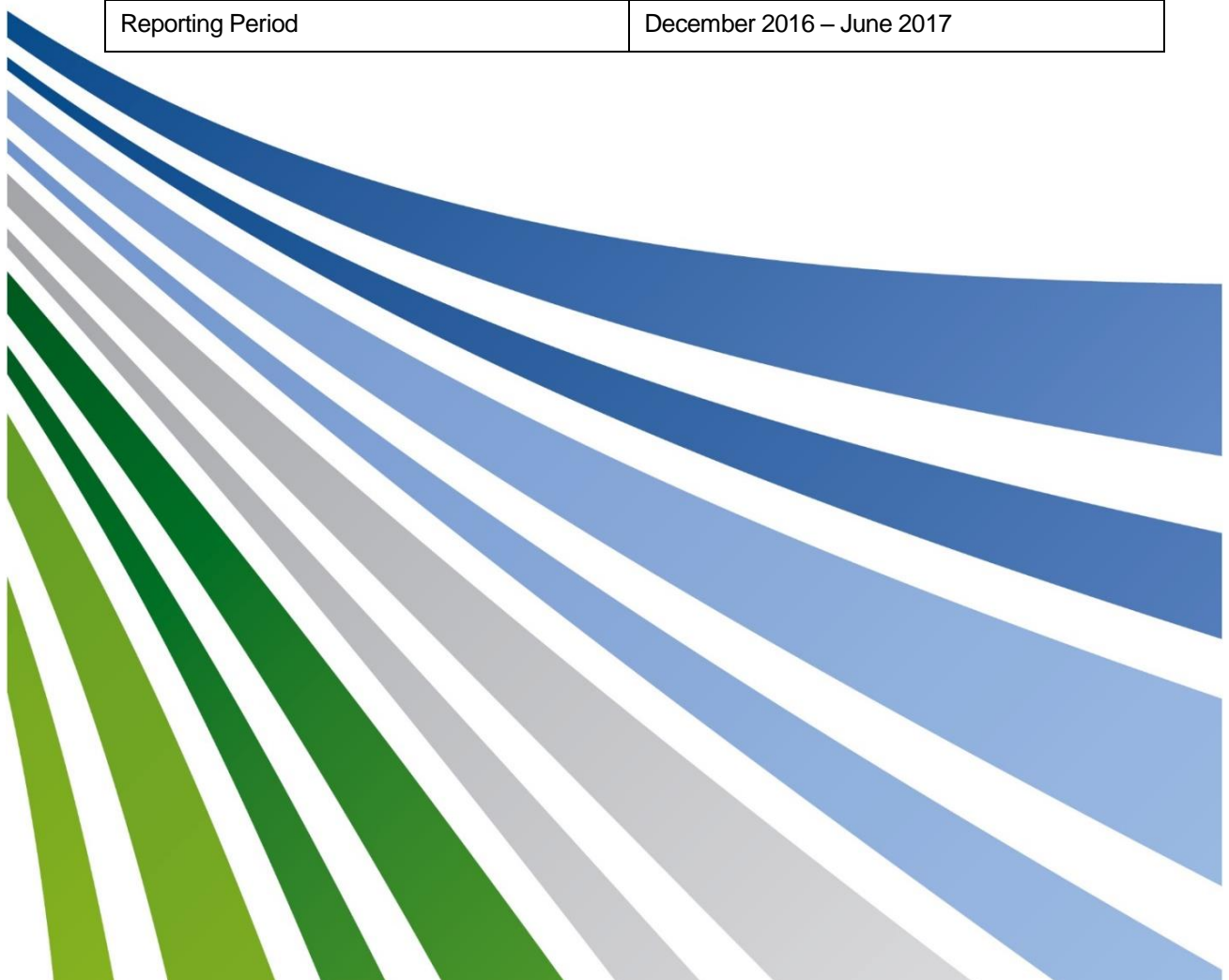




## SAVE (Solent Achieving Value from Efficiency) Project Progress Report

Project Number	SSET206
DNO	Southern Electric Power Distribution Ltd
Reporting Period	December 2016 – June 2017



**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.**

Document Owner(s)	Project/Organisation Role
Charlie Edwards	SAVE Project Manager

#### Version Control

Version	Date	Authors	Change Description
0.1	2/6/17	Charlie Edwards	Initial draft for review
0.2	6/6/17	Charlie Edwards	Revised draft for review
1.0	15/6/17	Charlie Edwards	Final version

# 1 Executive Summary

*Ofgem guidance: Executive Summary (This section should be no more than 4 pages) this section should be able to stand alone and provide a clear overview of the project's progress and any significant issues over the last period. All stakeholders, including those not directly involved in the project, should be able to have a clear picture of the progress. The DNO should describe the general progress of the project and include any notable milestones or deliverables achieved in the period. The Executive Summary should also contain two subsections: one for the key risks and one for the learning outcomes.*

The SAVE (Solent Achieving Value from Efficiency) project is a £10.3m project which is primarily funded by Ofgem's Low Carbon Networks (LCN) Fund, aiming to assess the use of energy efficiency measures as an alternative to traditional reinforcement. The Project involves a cross-section of domestic customers which are representative of much of the UK. Organisations collaborating as partners with Southern Electric Power Distribution (SEPD) to manage and deliver the Project include the University of Southampton (UoS), Future Solent, Neighbourhood Economics Ltd (NEL) and DNV GL. The Project involves approximately 8,000 customers across 4 methods of intervention: using media campaigns linked to the electrical consumption of individual households; adding a financial incentive to these campaigns; deploying LED lighting; and using community energy coaches.

The end of the last reporting period noted the on-going re-installation and recruitment of participants to the SAVE Project following the Formal Change Request CR-02. The project's last progress report highlighted a fix carried out to SIM enabled units as a result of communications issues. This fix proved successful throughout the latest reporting period, significantly increasing the reliability of SIM enabled units. Furthermore, trial recruitment was completed in January 2017 with 4318 monitors installed across the trial base.

Ongoing focus remains on both domestic monitor communications and project attrition in order to maximise trial sample size and hence achieve statistical validity from the project. Communications on the project have seen a steady on-going reduction in units feeding data back to the project, with approximately two-thirds of these issues being as a result of disconnected internet receivers or lost communications. While the installation process was ongoing, these issues could be addressed at a reduced cost given the presence of field teams carrying out other works. Once the re-installation process was complete the project determined this method of engagement was no longer cost-effective and as a result tailored postal interaction has been favoured to minimise communications issues.

In addition to communications logging, the project is holding weekly calls to discuss attrition rates. In the 4 months following install (29/5/17), the project had seen an attrition of 626 people from the project or 7% of the total population, as compared to an anticipated 5% across the year. These rates are anticipated to slow as the project population becomes more stable, however should such trends continue the project could reach attrition of 14% by the start of Trial Period 2 (TP2) in October. The project has discussed means of minimising attrition and cost-benefit analysis of these methods against further recruitment is being carried out. Should re-recruitment be required then the project is

considering a preference of SIM enabled routers over ASUS routers (which use a home's wi-fi) to avoid the large number of issues associated with disconnected units.

The methods of intervention deployed on SAVE are being delivered across three principal trial windows. Within this reporting period the project's Community Energy Coaching (CEC) method completed its second trial window which ran from October 2016 to March 2017, whilst the other methods of intervention completed their first trial window which ran from January 2017 to March 2017.

Across the last 6 months, the community energy coaching (CEC) trials in project areas Kings Worthy and Shirley Warren continued to make good progress integrating with local stakeholders, with the notable achievement of the Shirley Warren Working Together group formally constituting themselves in March 2017. Project partners Neighbourhood Economics (NEL) are working closely with SSEN's stakeholder engagement team to understand how best they can achieve added value through their trial interactions. The project is still to see any evidence of quantitative load-reduction through the feeder monitors deployed on the CEC method.

With regards to the methods formally known as 1-3 (LED engagement, data informed engagement and data informed engagement + price signals) the project has benefited from a wealth of data provided by the approximately 4000 Navetas Loops. Despite initial trials not yet highlighting a statistically significant load-reduction across any of the trial groups, and LED uptake being lower than anticipated (despite a significant number of website views) the first iteration of engagement has provided some key insights and baselining for future trial iterations. Outcomes of the project's analysis currently point towards no impact of incentivised engagement against non-incentivised engagement; however when examining the impact of engagement across different societal demographics statistics are beginning to show clear differences in capabilities between households.

Within Trial Period (TP2) the project will look to test a range of innovative techniques for engaging domestic customers, including more personalised mailers or introducing a competitive element to the trials. The LED trials, which have already tested trial participants' appetite to 'opt-in' to an initiative, will now look to test their appetite to 'opt-out' of DNO led installation of LED's. The procurement and relevant HSE (Health, Safety and Environment) procedures for this work are currently being developed.

To maintain a clear focus on the successful management of the various packages of work, the Project has held six Project Partner Review Board (PPRB) meetings, enabling all partners to meet at least once a month to discuss progress and plan activities. Representatives from suppliers BMG and Navetas have been present at the vast majority of these meetings in order to provide updates on equipment and industry expertise.

## 1.1 Risks

*Ofgem guidance: The risks section reports on any major risks and/or issues that the DNO encountered, including any risks which had not been previously identified in the Project Direction. The DNO should include a short summary of the risk and how it affects (or might affect) delivering the Project as described in the full submission. When relevant, the DNO should group these key risks under the following headings:*

- a. recruitment risks – describe any risks to recruiting the numbers of customers to take part in the Project as described in the full submission and how these will impact on the Project and be mitigated;*
- b. procurement risks – describe any risks to procuring the equipment and/or services needed for the Project, as described in the full submission, and how these will impact on the Project and be mitigated;*
- c. installation risks – describe any risks to the installation of the equipment (including in customers' homes, and/or large scale installations on the network) and how these will impact on the Project and be mitigated; and*
- d. other risks.*

Project risk management is considered in detail in section 4 of this report; a high level summary is shown below:

<b>Risk Description</b>	<b>Further details and impact</b>	<b>Controls</b>
<b>Recruitment</b>  Attrition of project participants          Break up of Partnership.	<p>Following re-recruitment, attrition on the project has been higher than anticipated with project participation falling 7%, from 4318 in January 2017 to 3692 in May 2017. SAVE understands that attrition has not been affected by trial interventions with rates similar across trial and control groups. The project has also assessed how reduced participation may affect statistical significance of trials.</p> <p>Through dispute or disagreement, partnership dissolves with one or more partners electing to leave the Project Board.</p>	<p>-Update letters to be sent to all participants in Summer thanking them for ongoing project participation.</p> <p>-Project carrying out cost-benefit analysis as to boosting participation through increased payment to users or re-recruitment pre TP2 (UoS happy this will not affect trial results).</p> <p>-Trial design awareness that participation rates may be lower in TP3</p> <p>-Discussion with SSEN smart meter programme to assess availability of data come TP3.</p> <p>Contracts in place and regular PPRBs allow for continued proactive contact to highlight any potential issues. Following equipment issue, Maingate Enterprise Ltd have left the Project, however other partners remain committed.</p>
<b>Procurement</b>  LED Installer	TP2 will look at DNO led install of LED's in customer premises. Procurement of a company able to carry out this install is underway, this process requires diligence is paid to safety procedures and customer engagement approaches to minimise attrition.	-SAVE working with SSE SHE team to ensure all safety aspects can be covered by contractors shortlisted.
<b>Installation</b>  Failure of equipment and lack of data. Equipment faulty and data not available.       Communications drop	<p>Equipment/portal failure through IT issues or battery failure. Inaccurate data from devices.</p> <p>Drop in communications over time being monitored closely by the project team. Sudden drop in communications as a result of network fault</p>	<p>-Close working relationship with Navetas to ensure awareness of any IT updates/changes.</p> <p>-Weekly communication between Navetas and UoS to ensure data from 'Loop' is of sufficient quality, including reporting of those observations with more than 5% observations missing.</p> <p>-Regular reporting on communications and break-down of issues.</p> <p>-Communications being addressed in most cost-effective means available.</p> <p>-Diverse communications types (SIM enabled and WIFI connected clamps) to minimise impact should there be a network issue.</p>
<b>Other</b>  Modelling requirements	-Data not able to feed between models due to quality and misalignment of inputs/outputs.	<p>-Initial modelling discussions re-started early following re-installation.</p> <p>-Regular progress calls with UoS, EA Tech, SSEN, and DNV.</p> <p>-Dedicated SSEN resourcing to deliver network investment tool to quality and time.</p>

## 1.2 Learning Outcomes

*Ofgem guidance: The learning section reports on the learning outcomes outlined in the Full Submission. This section should include, but is not limited to:*

- a. a summary of the key learning outcomes delivered in the period;*
- b. a short overview of the DNO's overall approach to capturing the learning;*
- c. the main activities towards third parties which have been undertaken in order to disseminate the learning mentioned in a.; and*
- d. the DNO's internal dissemination activities.*

*Please note that these two subsections should only give an overview of the key risks and the main learning. They should not replace the more detailed information contained in the "Learning outcomes" and "Risk management" sections of the progress report.*

Learning outcomes are considered in detail in Section 6 of this report, however during this period the main focus has been on setting up the project to ensure successful trials in the future.

There have been no SDRCs completed within this reporting period, and with the coordination and analysis of data from the trials to inform SDRC 4 and plans for next iterations, lessons learned have primarily been ad-hoc and process related. These are:

- There has been no clear evidence as yet of differences in response rates between trial groups at the start of Trial Period 1 or after five weeks of interventions.
- The time use survey<sup>1</sup> process appears to be efficient, taking an average of 10-12 minutes.
- Some participants have revealed that having more contact than anticipated (primarily telephone-based) was a reason for leaving the trials. This indicates the delicate balance between appeasing customers who want to remain informed at all times, and those who would rather have minimal contact.
  - Noting this however, analysis of attrition suggests that there are no effects as a result of being part of one particular group.
- The randomized control trial approach being used in the project has been validated by academic papers published in December 2016 which makes recommendations for such an approach.
- It is very difficult to design a 'success metric' at the individual household level for demand reduction as it is unclear what to compare to especially given both daily and seasonal trends in energy demand.
- The peak in consumption across domestic customers does not appear to be occurring across typical weekday peak times, instead significant evidence from winter 2016/17 data indicates that the peak occurs on a Sunday (this is consistent across the data gathered excluding Christmas Day).

### Approach to learning capture

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<sup>1</sup> Time use surveys allow the project to understand the activities that attributed to certain consumption patterns within a home over a given time period.

The approach to learning capture is focussed on capturing both structured learning in the forms of SDRC reports, and unstructured learning via lessons learned reviews and ad-hoc recording of insights. This aims to capture results drawn out from data analysis and reviews of activities, and also tacit knowledge that may not typically be captured in formal documents.

### **Summary of Third Party targeted dissemination**

- In March the project's planned methodology and objectives were referenced at the closedown event of two of SSEN's flagship innovation projects; NTVV & NINES
- On 10<sup>th</sup> May the project was promoted in a talk given as part of the University of Southampton's Clean Carbon University Strategic Research Group (USRG)
- Two open days were held on 10<sup>th</sup> May with participants from the data informed engagement trial and on 11<sup>th</sup> May with participants from the data informed and price signal trial.
- The project has engaged all other GB DNO's to provide an understanding of SAVE and gain best insight into any updates to external projects that can feed into SAVE.
- The project has engaged suppliers through Energy UK and those party to DCUSA to understand their stand-points on time of use (ToU) tariffs.

### **Summary of internal targeted dissemination**

The Project uses organised events such as Steering Boards and Team Briefs as a means of internally disseminating progress and information in a structured manner, with informal communications between colleagues and departments also acting as a means of raising awareness of the Project and progress towards delivering learning.

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## 2 Project manager's report

*Ofgem guidance: The Project manager's report should be a more detailed version of the Executive Summary. This section should describe the progress made in the reporting period against the Project plan. Any key issues should be drawn out and described in detail, including how these issues were managed. The DNO should also include details of deliverables and/or events, referring where necessary to other sections of the PPR. This section should also provide an outlook into the next reporting period, including key planned activities. It should describe any key issues or concerns which the Project manager considers will be a major challenge in the next reporting period.*

This reporting period has seen completion of the reinstallation process, with the project population growing from 3983 at the last point of reporting to 4318 in January 2017. Across this time period the project also initiated and completed its first live trial period for methods 1-3 on the project with formal planning on-going for trial period 2 (TP2). Meanwhile method 4 (M4) on the project continued its second trial period which ran from October 2017 and closed in March 2018. Planning is ongoing for this methods next and final trial period, TP3. Having progressed live trials the project has now run its first open day events with participants from method 2 (M2); data informed engagement, and method 3 (M3) price signals. Plans are in place for further open days with method 4 (M4) participants in autumn.

In accordance with live trials the team are progressing project deliverables in line with SDRC 4- Create Commercial Energy Efficiency Measure, drawing upon commercial expertise both within and outside of SSEN. This includes the establishment of a pricing model; a key element of the project's Network Investment Tool. This SDRC will be submitted at the end of June 2017.

### 2.1 Metering and data gathering

With reinstallation of household monitoring completed in January 2017 following Ofgem acceptance of change request 2 (CR-2) in July 2016, the number of SAVE project participants (for the control group, M1, M2 and M3) was 3692 in May 2017, down from 4318 in January 2017. Data gathering has been a core focus of the project with weekly teleconferences attended by project partners University of Southampton and DNV GL, and suppliers Navetas and BMG to monitor statistics and determine the best approach to managing both failed communications and project attrition.

Throughout the project's re-installation of equipment, between June 2016 and January 2017, on-going attention was paid to the communications status of the devices. Communication status of devices was observed to drop online and offline over variable time-periods, therefore obscuring the scale of communications issues. When a clamp is offline for greater than 30 days data will be overwritten as per the functionality of the Navetas Loop. Within the re-installation process, as and when communications issues were recorded these were addressed by the BMG field-teams carrying out installs close to these homes, hence maximising efficiency.

Following full re-installation SSEN made the decision to continue to procure 250 BMG visits and 12 days of pro-active Navetas support (Wave 1) in order to continue to address any outstanding communications issues. This additional support was provided up until 28th February 2017.

Throughout Wave 1 of support, the project was able to manage and reduce communications issues, however the project remained mindful of new communications issues which were arising elsewhere within the project's population. In order to best address this going forward three key actions were taken with additions made to monthly reporting:

- Providing a month-on-month breakdown of communications issues across each phase of re-recruitment.
- Better understanding the varying reasons for communications issues and their contribution to the overall problem.
- Gaining insight into the number of cases of repeat issues on a single customer.

Recruitment of SAVE participants between June 2016 and January 2017 was broken down into seven defined phases (approximately one per month). By understanding the number of Navetas 'tickets' (a ticket raised indicates a need for action from Navetas) raised against each phase on a month by month basis the project could look to predict whether communications issues were likely to continue at rate of the same trajectory, lower or higher. This month-on-month ticket growth can be seen in Figure 1 below. This shows very clearly a decrease in ticket growth over time, most notably for those participants recruited in the earlier Phases in 2016. These statistics provide a suggestion that over time, through teasing out initial teething issues, action required on communications are likely to decrease.

		Ticket Growth %				
		Nov	Dec	Jan	Feb	Mar
Recruitment Phase	Phase 1 (Jun)	9.771987	4.560261	7.166124	4.885993	0.651466
	Phase 2 (Aug)	9.105691	8.617886	5.691057	6.99187	5.691057
	Phase 3 (Sept)	10.51136	7.670455	7.102273	5.113636	6.25
	Phase 4 (Oct)	19.46903	10.91445	10.32448	6.784661	0
	Phase 5 (Nov)	N/A	N/A	10.62937	9.090909	3.216783
	Phase 6 (Dec)	N/A	N/A	9	10	3.5
	Phase 7	10.34097	7.490218	8.049189	7.881498	5.254332

Figure 1 Ticket growth heat-map

It became apparent from Navetas and BMG's customer engagement that issues resulting in offline communications could materialise through a range of different circumstances, some of which could be resolved via letter or telephone communication whilst others might require new pieces of kit and/or site visits. By breaking down issues into categories, the project team could not only identify where and why the majority of issues were materialising but could also act upon those issues in the most effective manner. Figure 2 below shows a pie chart illustrating the break-down of customer issues throughout the project as of April 2017.

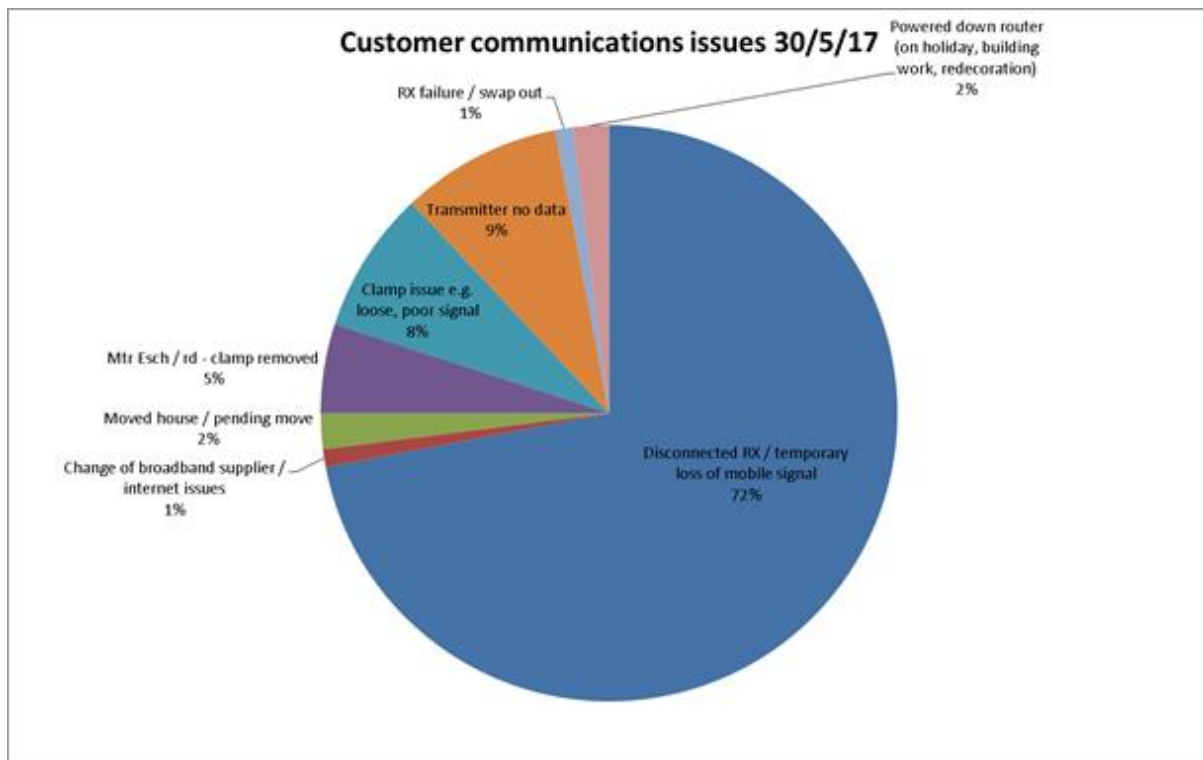


Figure 2 Customer issues April 2017

It is apparent from the above that the majority of customer issues are as a result of a disconnected RX or a temporarily loss of mobile signal. In order to address these specific issues the project has sent 300 tailored mailers to customers where appropriate with a 25% response rate (a 2% response rate would have broken-even compared to cost of site visits).

The project has also focused specifically on clamps that are being removed from customers' premises as an issue that is more challenging to resolve through pro-active customer engagement and in some cases results in lost kit. Feedback has revealed a significant proportion of these may be due to smart meter installs and as a result SAVE has reached out to the Association of Meter Operators (AMO) who discussed the issue with the forum's chairs and set the project as an agenda item for the forum's meeting on 2/5/17.

Finally the project has looked to understand repeat incidents on customers to ensure that visits and money are not being spent on a small sub-set of the project population. Figure 3 below shows an extract from April 2017 illustrating that currently only a small percentage of the overall project population have experienced repeat issues.

		Recruitment Phase							
		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Average
No. of issues	0	59.2	66.6	68.8	69.8	78.1	81.3	65.2	68.76756
	1	29.9	26.1	25.4	24.2	19.7	17.5	29.5	25.833
	2	8.86	5.78	4.43	5.3	2.02	0.81	4.36	4.435969
	3	1.77	1.26	1.17	0.46	0.22	0.41	0.84	0.843035
	4	0.33	0.33	0.28	0.29	0	0	0.06	0.138953

Figure 3 Repeat customer issues

The second key area of focus to maximise available data to the project is attrition. SAVE initially predicted and accounted for a 5% attrition rate in the project population, per year, as a result of house moves and project opt-outs. Daily attrition on the project was therefore assumed at 0.01%, however as of April 2017 this was instead 0.25%. Early attrition rates were expected to be higher as those least interested in the project dropped-out, however these statistics are being carefully monitored to ensure trends don't continue. The project has also looked to see if trial interventions have had an impact on attrition, however no significant impacts are evident.

To provide contingency to this attrition the project is carrying out cost-benefit analysis as to how it might maximise project participation. Currently two key mechanisms have been discussed, increased incentives or new project recruits; the University of Southampton are happy that recruiting new project participants before TP2 in October would not skew trial results. In addition to this the University of Southampton have provided evidence as to how statistical significance will be affected as the project population varies, working this through with DNV GL will allow the optimum budgetary decisions to be made to maximise project learning.

Moving forwards, the project also notes that it does have a contingency of the factorial approach (see project bid document, p.8) to trial design come TP3 if deemed most suitable. This will allow for testing of interventions with a lower project population.

At time of last reporting the project noted an upgrade to the SIM enabled ASUS units procured by Navetas to allow non-internet connected households to continue to participate in the Project. This upgrade was as a result of almost 66% of these installs failing to provide consistent communications. The project can confirm that the December update to these units was successful in almost eradicating this issue. This up-date was so successful that if the project does recruit new participants prior to TP2, consideration is being made to these all/largely being SIM enabled to mitigate against the significant issue of unplugged kit/modems.

As the project has progressed through TP1 regular engagement with Ofgem has been key, through monthly updates to ensure consistency with the project's core purpose and discuss current issues.

As noted in SAVE's December 2016 PPR, the project is uncovering significant learning pointing towards the stacked value cases for DNO access to smart meter data. Given the attrition and communications challenges being experienced when utilising bespoke monitoring equipment for domestic DSR; the project continues to highlight the benefits of smart meter data in delivering such initiatives. The SAVE project is feeding in directly to SSEN's internal smart metering team who have run a series of workshops compiling the benefits of data at different levels throughout a DNO. It is apparent that while independently sourced monitoring solutions may be more expensive and higher risk, legislative constraints would need to be overcome and encouragement given to suppliers to work collaboratively with DNO's before Smart Meter data becomes a valid alternative.

## 2.2 Live trials and future design

### 2.2.1 Trial period 1

Within this reporting period the project saw both inception and completion of its first live trial period (TP1) which ran from 1st January to 31st March 2017. In total, the trial had four groups: one control and three treatment groups; previously known as methods 1 (LED engagement) 2 (data informed engagement) and 3 (data informed engagement and price signals). Upon initial analysis of TP1 however, the project team discovered a processing error in the participant lists used for online communication<sup>2</sup>. This materialised as a result of project numbering not accounting a reference number for the control group. Whilst the project is confident this has not affected learning outcomes (and instead allows the project to trial a range of alternate and unanticipated hypotheses), to avoid such errors in future the project has re-aligned trial groups as outlined within Table 1 below.

**Table 1 Realignment of trial groups**

Original method of engagement	Original method name	TP1 engagement material received	New method name
Control group- no material received	N/A	Control group- no material received	TG1
LED engagement	M1	LED engagement + online data informed engagement	TG2
Data informed engagement (online and postal)	M2	Data informed engagement (online and postal) + price signals	TG3
Data informed engagement (online and postal) + price signals	M3	Postal data informed engagement	TG4

This numbering system will now be used by the project in order to mitigate against the risk of such errors occurring in the future. As is suggested above the processing error had no impact on the control group (1) and solely affected groups 2 and 4. In addition to the LED engagement targeted at Group 2, these participants also received online data informed engagement; meanwhile Group 4 received solely postal data informed engagement as opposed to postal and online as originally planned.

These changes to messaging have allowed the project to identify a range of different outcomes, acting as a building block for trial period 2 (TP2), which will provide ample opportunities to test direct comparison between data-informed messaging and price signals. Given the minimal impact and low uptake of LED trials in group 2 (see section 2.2.1.2.1), this sample group can largely be assumed neutral from this form of engagement; resultantly SAVE can gain value from this group by

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<sup>2</sup> It should be noted this processing error had no data protection implications.

understanding the difference between customers receiving just online communication (group 2), just postal communication (group 4) and both e-mail and postal communication (group 3). This not only provides significant insight into one of the project's key learning outcomes "to identify the most effective channels to engage with different types of customers" (Project Bid, 2013) but moving forward, this will allow the project to ensure it is contacting customers in the most cost-effective means. This will be further tested with the engagement groups in TP2 (see section 2.2.1.2.3).

In TP2, group 2 will only receive LED related messaging, whilst groups 3 and 4 will provide a direct comparison of the impact of messaging with and without price signals.

### **2.2.1.1 TP1 Design Considerations**

The design of trial period 1 (TP1) sought to build on formal learning from past studies (as summarised in SDRC 1) as well as informal conversations with staff from other DNOs and LCNF projects (these are ongoing projects and as such they are still evolving). TP1 did not seek to address all of the findings from SDRC 1, but did build on many of the key lessons (as seen below in italics). Others will be addressed in subsequent trial periods. Key findings applied to the TP1 design include:

- *Customers cannot be engaged as a single group. The way in which people react to attempts to change their energy behaviour differs and engagement needs to be tailored appropriately without resulting in prohibitive costs.* While the customer engagement messaging was consistent across the group, messages were delivered across multiple mediums: post, email, web portal and text. This allowed participants to interact with the mediums they felt most comfortable.
- *Customers need to understand how they can reduce their energy usage and be educated appropriately. This can be through a combination of physical equipment, information and advice.* Trial messaging started with general knowledge about DNOs, the electricity network and the peak period. It then moved on to specific and actionable requests, such as waiting until after 8pm to run the dishwasher.
- *Parties delivering messages to customers need to be seen and recognised as both trustworthy and authorities in the subject matter. These attributes are not necessarily found in one entity and partnership between energy companies and trusted groups such as local organisations and community groups can be a way of overcoming this difficulty. Also effective, is to allow multiple organisations to deliver messages that are consistent on a theme yet approached from their different perspectives.* Engagement messaging emphasised project partners University of Southampton (and to a lesser extent, SSEN) to give legitimacy to our requests. This was especially prevalent on the LED messaging to avoid being seen as 'junk mail'.
- *Financial incentives can be effective but potentially need to be relatively large and impacts are often not sustainable over time; non-financial incentives should also be considered.* In this trial period the team tested a one-time incentive, recognising that regular incentives are not sustainable in the long term. However for this trial the team elected to keep the incentive relatively small (up to £10 per household) to allow subsequent trials to test other means of incentives, including larger prizes or draws.
- *There is a delicate balance to be struck between using negative concepts such as 'waste' or 'loss' while also making customers feel good about themselves.* The engagement campaign

stayed positive, asking customers to 'do their bit' and offering advice instead of highlighting their wasteful practices. Similarly, the LED campaign highlighted the money saving opportunities afforded by LED bulbs over traditional halogens.

- *Customer commitments through setting goals and targets can be very effective to achieve longer-term behaviour change, but often need strong incentives to give them meaning.* Trial period 1 touched on targets (a 10% reduction for the event day groups) but this will be explored in more detail in trial periods 2 and 3.

### **2.2.1.2 TP1 Overview and Results**

#### **2.2.1.2.1 LED Engagement**

Group 2 engagement initially looked to understand the uptake of discounted LED bulbs by approximately 1,000 customers. Partnering with LED Technology provider RS Components, this trial method looked to offer a 20% discount on LED lighting through postal vouchers sent out to customer's homes. The bulbs were chosen to match the bulbs and fixtures most commonly found in residential properties.

Customers were directed to the [saveled.co.uk](http://saveled.co.uk) site via two postal mailings developed by DNV GL and Behaviour Change. The first mailing was a four page A6 booklet that explained the advantages of LED bulbs over traditional technologies: lower operational costs, longer lifespan, average payback period and warm colour light. The booklet also introduced RS components as a partner of the University of Southampton and SEN to show to consumers that they were a trusted supplier. The second postal mailer was a post card with a reminder of the discounted offer and a call to action. Each mailer was addressed to the participant by name and branded with the SAVE logo to give the promotion legitimacy and avoid it being dismissed as a junk mail promotion. The mailers were delivered in a bright pink envelope to further distinguish it from other post.

Figure 4: Interior of initial LED mailer



**WHAT'S ALL THE FUSS ABOUT LEDS?**

Not so long ago all our lights used filament bulbs, the type that hadn't changed since the invention of the lightbulb. Lovely to look at but really inefficient, giving off more heat than they did light and costing us a fortune in energy bills.

Filament bulbs have now all but disappeared in favour of more energy efficient types. LEDs are by far the most efficient option, saving up to 85% in energy use and making them one of the simplest ways to reduce bills.

LEDs have an incredible life span and can last 20 times as long as a filament bulb. This means the higher upfront cost is more than outweighed – in fact, they generally start to pay for themselves in savings after only 5 months.

Modern LED bulbs offer a warm light and come in all shapes and sizes. Not just like-for-like replacements for your existing bulbs but also some beautiful new decorative styles that replicate filament bulbs.

**Big Savings**  
ON LEDS  
EXCLUSIVELY FOR  
SAVE  
PARTICIPANTS

**20% OFF**  
AND BETTER VALUE THAN  
THE HIGH STREET

**FIND YOUR**  
PERFECT BULB  
NOW AT  
[WWW.SAVELED.CO.UK](http://WWW.SAVELED.CO.UK)

CHANGING  
**6**  
HALOGEN BULBS  
IN YOUR KITCHEN  
FOR LEDS WOULD  
SAVE £XXX  
PER YEAR

Visit [www.saveLED.co.uk](http://www.saveLED.co.uk) where a simple guide will help you find the bulb you need to replace your existing one and help with installing it. We've selected top branded bulbs from Osram and RS Pro.  
*This offer is only available to SAVE participants.*

**SAVE**  
Solent Achieving Value from Efficiency

RS Components hosted the website and tracked the number of views and the take up (order) rate of LEDs. Billing addresses were matched to participant addresses to ensure the LED orders were made by project participants and not passed along to family or friends.

### Results

Over the length of the trial, the website had 225 page views. This represents about 19% of the participants who received the leaflet/postcard in the post.<sup>3</sup> Of these visits, 69% progressed to a product page while 31% left the website before viewing a product. Of those that visited the site, 5 participants made a purchase. This translates to 0.4% of participant take up of the discounted LED offer.

This take up is not entirely unexpected, as direct mail has average response rates of somewhere between 1 and 3.7% depending on type of mailing list and product (Haskel, 2015). The web conversion rate of 19% is higher than expected, although the actual buy rate is lower than expected. These initial results set a firm baseline for future trial periods.

As noted above, the result of the low uptake of LED's in group 2 can be analysed as a baseline comparison for the impact of solely online mailing against solely postal mailing (group 4) for the customer engagement messaging.

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<sup>3</sup> 1,137 household received mailers about the benefits of LED lighting.

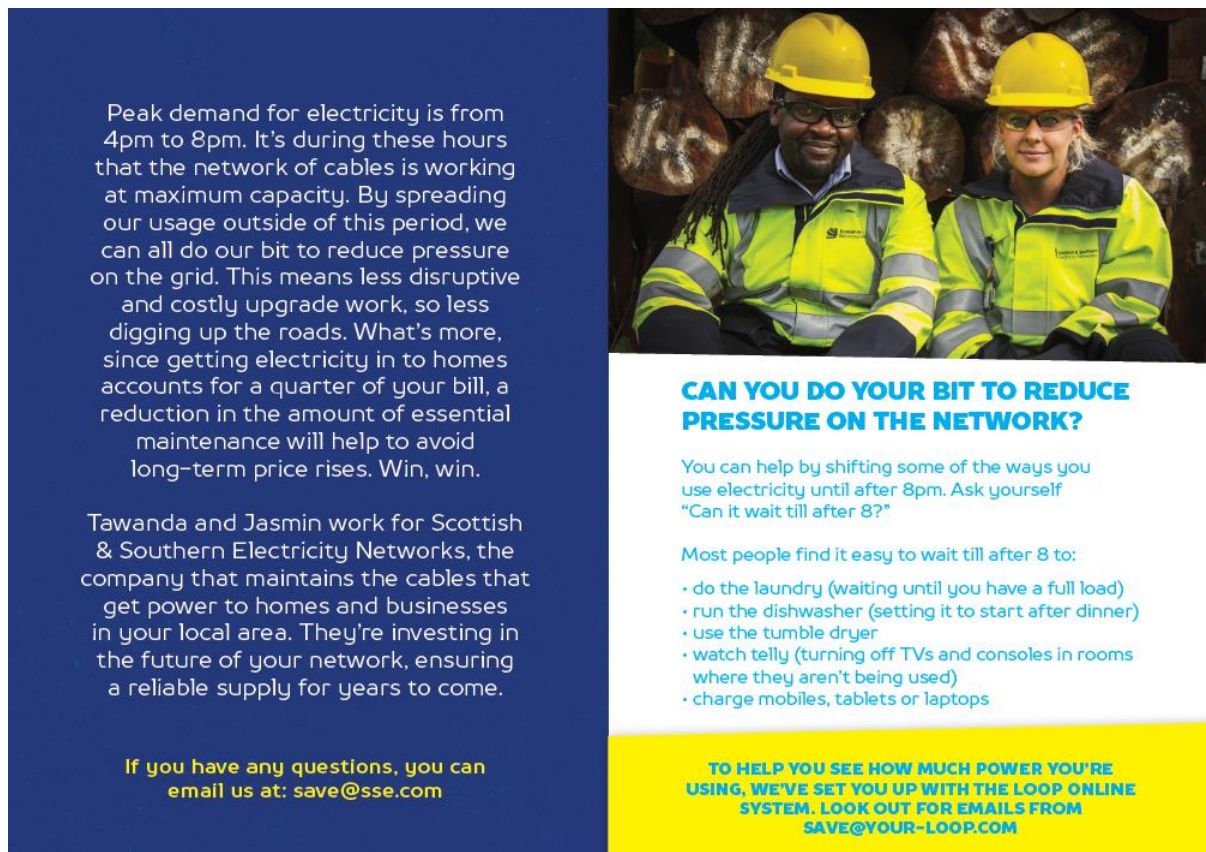


### 2.2.1.2.2 Consumer Engagement

The SAVE Project is also exploring how consumer engagement techniques can be used to shift electrical consumption out of the peak period. TP1 focused on general education around the peak period and energy efficiency. It introduced the idea of a peak period of 4 to 8pm to consumers and explained why the electricity network is sometimes stressed at this time.

The engagement campaign started with an introductory booklet that asked consumers to “help keep the power flowing”. The booklet introduced two SSEN employees and explained how they are working hard to keep consumers’ power flowing. It also explained what SSEN does and the basics of how electricity gets to households. The booklet asked, “can it wait ‘till after eight?” and provided tips on simple ways to reduce pressure on the network.

Figure 5: Interior page of initial engagement booklet



Peak demand for electricity is from 4pm to 8pm. It's during these hours that the network of cables is working at maximum capacity. By spreading our usage outside of this period, we can all do our bit to reduce pressure on the grid. This means less disruptive and costly upgrade work, so less digging up the roads. What's more, since getting electricity in to homes accounts for a quarter of your bill, a reduction in the amount of essential maintenance will help to avoid long-term price rises. Win, win.

Tawanda and Jasmin work for Scottish & Southern Electricity Networks, the company that maintains the cables that get power to homes and businesses in your local area. They're investing in the future of your network, ensuring a reliable supply for years to come.

If you have any questions, you can email us at: [save@sse.com](mailto:save@sse.com)

**CAN YOU DO YOUR BIT TO REDUCE PRESSURE ON THE NETWORK?**

You can help by shifting some of the ways you use electricity until after 8pm. Ask yourself "Can it wait till after 8?"

Most people find it easy to wait till after 8 to:

- do the laundry (waiting until you have a full load)
- run the dishwasher (setting it to start after dinner)
- use the tumble dryer
- watch telly (turning off TVs and consoles in rooms where they aren't being used)
- charge mobiles, tablets or laptops

**TO HELP YOU SEE HOW MUCH POWER YOU'RE USING, WE'VE SET YOU UP WITH THE LOOP ONLINE SYSTEM. LOOK OUT FOR EMAILS FROM [SAVE@YOUR-LOOP.COM](mailto:SAVE@YOUR-LOOP.COM)**

Over the next nine weeks, this booklet was followed up with one general knowledge postcard and five postcards with specific asks (the plan for this approach is outlined in the project's December 2016 PPR), such as:

- Waiting until after 8pm to do the washing or running it only with full loads
- Waiting until after 8pm to charge mobiles and tablets
- Waiting until after 8pm to use the tumble dryer
- Waiting until after 8pm to run the dishwasher or using its timer/delay function
- Waiting until after 8pm to watch television or turn the television off in rooms that are not being used

All material provided contact details for SSEN staff and a reminder of the web portal where participants could see details on their energy consumption. However, the design team sought to

minimise the SSEN brand to avoid the mailings coming across as sales material (a potential risk if consumers do not fully understand the relationship between their DNO and energy supplier). As a result, the team designed a '4 to 8' logo to represent the campaign. This logo appeared on all the consumer engagement material: mailings, emails and the web portal.<sup>4</sup> Like the LED post, all of these mailings were addressed to the named contact the project had on file and came in bright pink envelopes. Postal mailings, emails and the web portal were all branded with the 4 to 8 logo for consistency.

Figure 6: '4 to 8' logo



All three treatment groups received some sort of consumer engagement messaging:

- Group 2 (LEDs and online data informed engagement) received emails and web portal notifications
- Group 3 (data informed engagement and price signals) received emails, web portal notifications and postal mailings
- Group 4 (postal data informed engagement) received postal mailings

Although the delivery mechanism differed, the content was identical across all platforms.

All participants had access to the Loop portal (<http://your-loop.com>) where they could track their electricity usage in real time online. The emails that groups 2 and 3 received included links to the portal. Future trial periods will focus more on encouraging engagement with the portal. The portal offers several features, including the ability for participants to see their real time and historical consumption (in CO<sub>2</sub>, kWh or £ and over the day, week or month) and a 'newsfeed' layout of energy savings tips (that mirror the postal mailings and emails). Additional capabilities of the portal will be trialled in subsequent trial periods.

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<sup>4</sup> However the control group's web portal was not branded with the 4 to 8 logo, as they did not receive any consumer engagement materials.

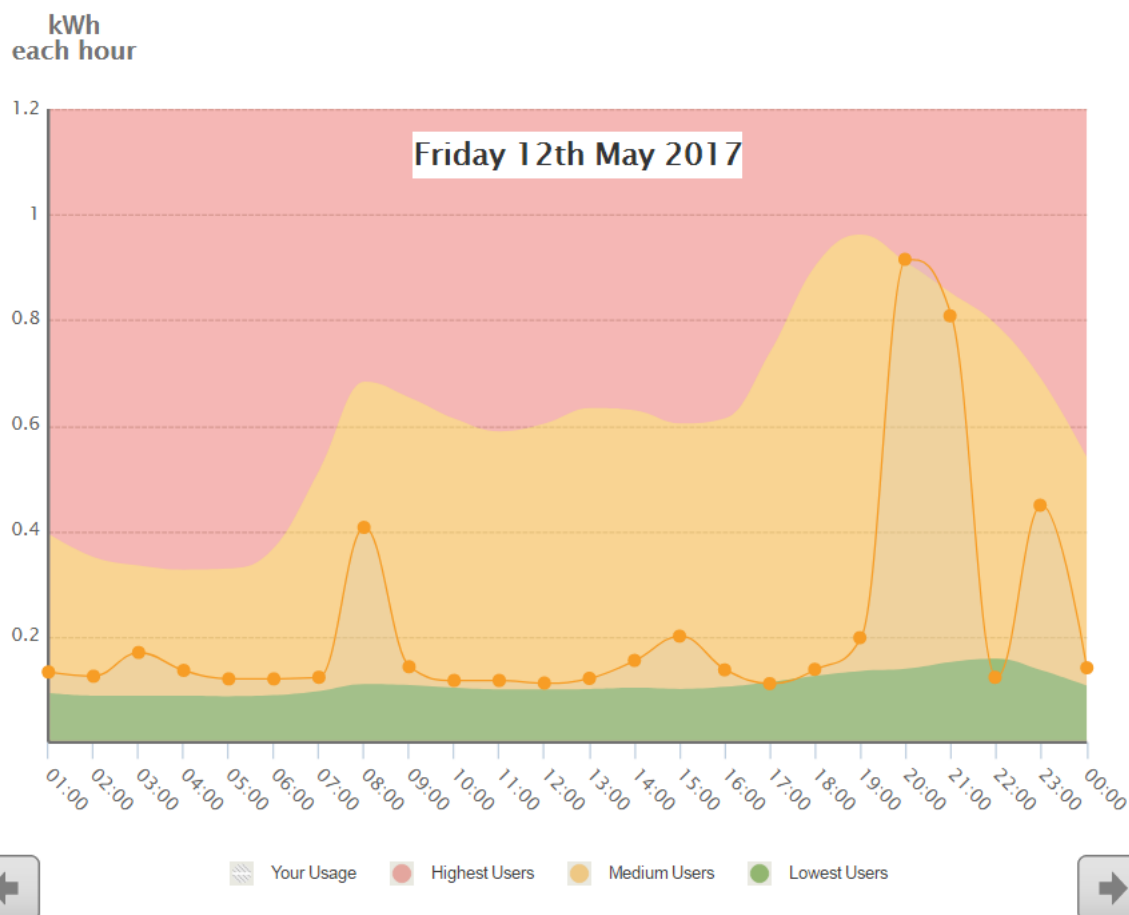


Figure 7: Daily graph of a household's energy consumption from the Loop portal

### Event Day

In addition to the consumer engagement messaging, two groups (Group 2 and Group 3) also received notifications about an 'event day' through emails and portal notification. This was designed to test consumers' ability to reduce their consumption on a specific (singular) day when the network was experiencing higher than usual stress. In the real world, this may be due to equipment failures, exceptionally high electricity use, maintenance work / taking equipment offline, weather, etc. The team chose Wednesday, 15 March as the event day to test a 'regular' weekday. Group 2 was asked to reduce their load by 10% during the peak period (when compared to the previous Wednesdays) without any incentive while group 3 was offered a £10 high street voucher if they met the request.

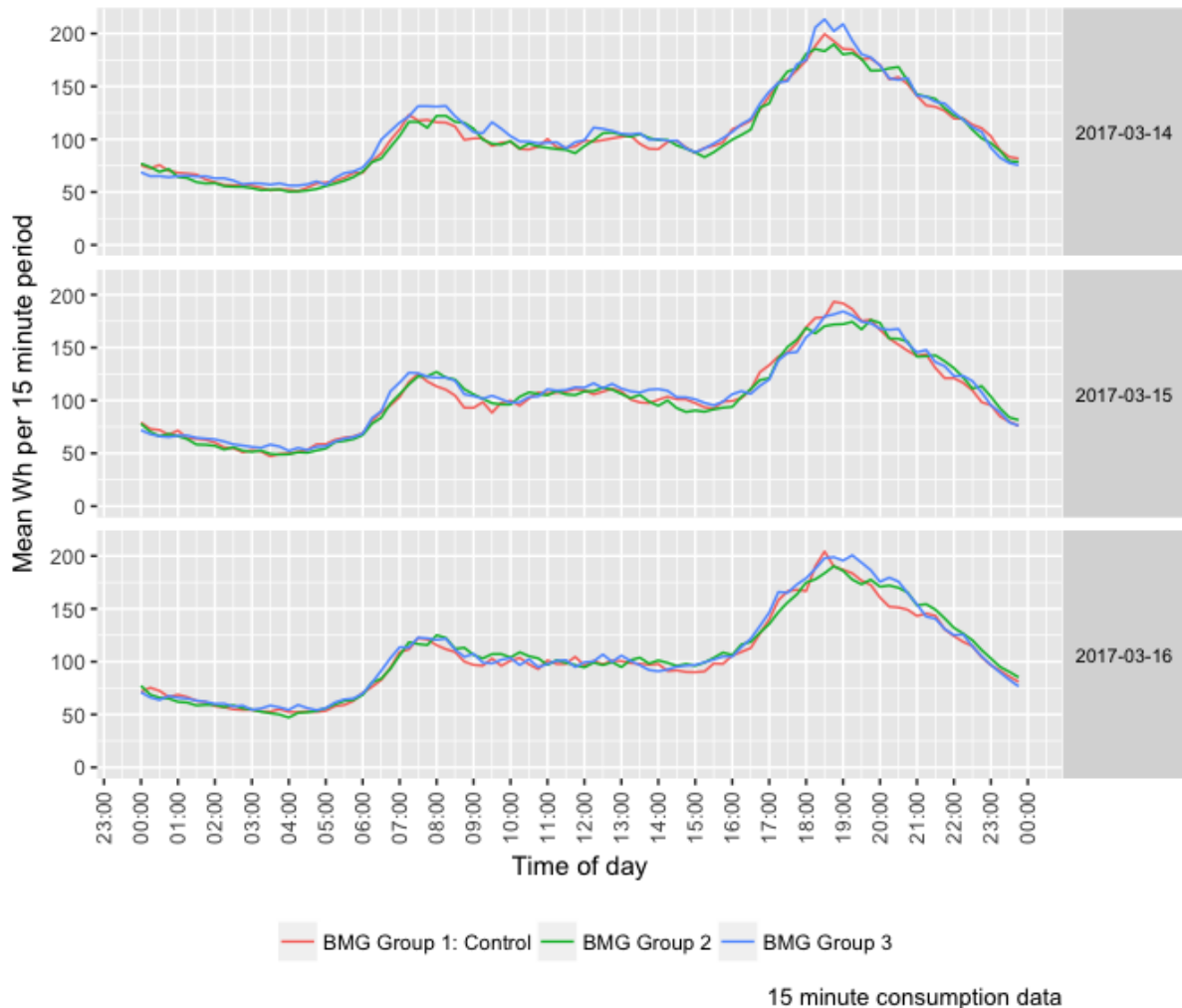
### Results

Preliminary analysis of TP1 is still on-going and full results will be reported on later in the SAVE Project. The project has expedited analysis of the event day on evening peak consumption in order to feed detail around impact of price signals into SDRC 4 due June 2017. The University of Southampton have analysed these results using two forms of analysis, both descriptive analysis, reporting on the difference in consumption between trial groups and regression analysis, to display the net effect of the interventions applied to each group.

Overall the results suggest that the interventions produced a small decrease in consumption during the event day peak period. Overall, on the event day:

- Group 2 mean Wh for the 16:00 - 20:00 period was 96.43% of the Group 1 (Control) mean - a reduction of 3.57 %
- Group 3 mean Wh for the 16:00 - 20:00 period was 96.67% of the Group 1 (Control) mean - a reduction of 3.33 %

This is illustrated in Figure 8 below which shows the event day on 15/3 in addition to the day before and after the event.



**Figure 8 Temporal profiles of consumption around event day**

The results also show the event day producing a small increase during the evening peak period of the day before and also the periods just before and just after the event day peak time. However, none of these effects were found to be statistically significant at the standard 95% level and this was true for all models and trial interventions.

There was also no statistically significant interaction effect between the presence of children and membership of a particular trial group although the size of the observed effects did vary for those with/without children suggesting potentially differing patterns of response by different kinds of households.

However, the analysis team has also identified that overall those who have children and households whose response person was retired have significantly different consumption patterns in the time periods analysed. Those with children tend to use more in the 16:00 onwards period whilst those with

a retired household response person use less. The opposite is the case for the pre 16:00 period. Overall those with higher pro-environmental scores resulting from the time-use surveys use less electricity in any period.

Analysis will continue and feed into the customer model over the next reporting period. Discussions have been initiated between project partners UoS in the development of the customer model and EA Technology in developing the network model to identify integration points across the tools and ensure suitable outputs for the project's network investment tool

#### *2.2.1.2.3 Trial period 2 planning*

Trial period 2 will build on the results of TP1 and continue participants' educational journey through additional and/or expanded objectives. The design of TP2 also reflects the learning gained through the literature review at the beginning of this project and summarised in SDRC 1.

#### LED Trials

While TP1 tested participants' likelihood to 'opt-in' by purchasing discounted light bulbs, TP2 will focus on the direct installation of LEDs in households that did not take advantage of the offer in TP1. This will test participants' willingness to accept the offer and be phrased such that they need to 'opt-out' if they do not want the team to install the bulbs. This offer will only be to group 2.

The SAVE team will send out emails and letters shortly before the trial period (which runs 1 October 2017 to 31 March 2018) and will aim to complete all installations within the first two months of the trial. The field team will schedule appointments directly with group 2 participants. Once on site, they will replace halogen, CFL or incandescent bulbs with LED bulbs provided by the SAVE project. Staff will record how many bulbs are installed, their location, type, wattage, and type/wattage of bulbs removed. The field team will prioritise replacing the bulbs with the highest use.

The SAVE team will follow up with a short survey to collect feedback on the LEDs and flag any potential concerns. Subsequent information delivered in trial period 3 (TP3) can seek to address these concerns.

#### Consumer Engagement

The consumer engagement campaign will continue in trial period 2, although it will only be directed at groups 3 and 4. It will build on the general information distributed in TP1 but with a focus of cutting energy use during the peak period (rather than shifting it outside the peak).

Comparisons between households have been shown to be very successful when based on intelligent like-for-like comparisons and combined with effective messaging. Research suggests that households need benchmarks to aim for in order to avoid complacency and to ensure they feel that there is another target to achieve. By comparing a participant's electricity usage with the average consumption of their neighbours, users who fall above that benchmark can be incentivised. But to

properly motivate users whose consumption already falls below that benchmark, their usage needs to be compared to 'the most efficient household.' Both average and most efficient benchmarks will be used in TP2. The simplest way to show these comparisons is through the Loop portal but the team is also exploring how to give a comparison via post, utilising digital printing to create custom mailers.

Targeted, personalised messages have proven effective when used by retail companies to better engage with customers. Like normative comparisons, customer segmentation is a prerequisite for this type of intervention – i.e., the more data that is available about customers, the greater the level of sophistication that can be integrated into the design. This leads to more effectively targeted and personalised messages. In TP2, the team will introduce participants to their personalised targets. A letter will inform them about the goal of the intervention, focusing on the expected outcome as well as the rewards available (rewards are for group 3 only). Participants will also be notified of the duration of the intervention, as well as the 'rules' that govern how the outcomes will be determined. During the intervention period the team will provide the participants with feedback and tips to improve their performance. These personalisations will likely be made through the loop portal, however as with the comparisons mentioned previously, the team is also exploring how to give a comparison via the post, utilising digital printing to create custom mailers.

Like TP1, TP2 will also include event days for groups 3 and 4. These will be explained in a similar fashion as in TP1; noting that the network is experiencing a period of stress and asking that participants cut their usage during a specific time. Unlike TP1, there will be multiple events on different days of the week, possibly for different durations and times of the day.<sup>5</sup> A particular period of note is Sunday afternoons, as initial monitoring shows that residential peaks on Sundays are even higher than week days.

### Price Signalling

Group 3 will be offered incentives to meet their targets outlined above. Since the project has already tested small incentives using the £10 voucher in the previous trial period, TP2 will utilise different incentives. These are likely to be in the form of prizes but the team will determine exact specifications closer to the trial period. The goal of this kind of price signalling is to offer a bigger reward to fewer individuals, like a raffle or prize draw.

In TP1, reduction rates were similar across the price signalling group and the group without price signals. This is consistent with past literature that suggests 'one-off' requests to help the network resonate with consumers and do not need to be accompanied by financial incentives (Strengers 2012; Strengers and Maller 2012). TP2 will test if this result persists or if the non-financial group is fatigued

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<sup>5</sup> The team is considering the impact that changing the time of the event day to something different than 4 to 8 will have on participants and mitigating against any potential confusion. The team is reaching out to other DNOs that have executed event periods with load shifting on residential customers to see if their participants easily followed the ask or if they expressed confusion.



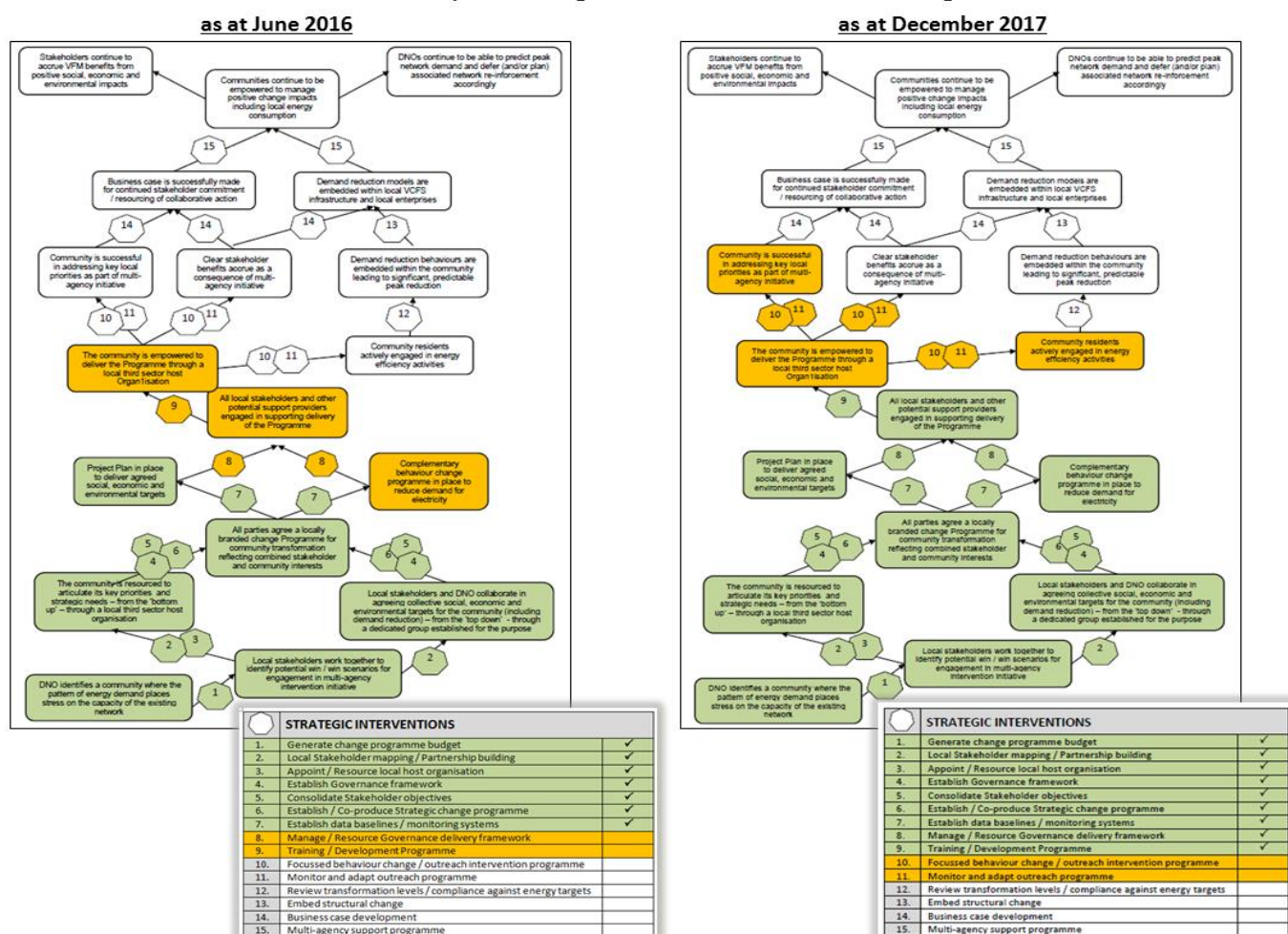
by multiple asks. It is possible that over time the non-financial group may lose interest in helping the network while the financial incentives can keep households engaged for longer periods of time.

## 2.3 Method 4 – Community Energy Coaching

Over the period December 2016 to June 2017, Neighbourhood Economics (NEL), has continued to lead the Community Energy Coaches from Winchester Action against Climate Change (WINACC) in Kings Worthy and the Environment Centre (tEC) in Shirley Warren in delivering SAVE Method 4, the Community Energy Coaching (CEC) trial. Significant progress has been made in accordance with the set Outcomes Chain for the Trial method as indicated in the following diagram.

Figure 9 Project Progress

### SAVE Community Coaching Trial - Outcomes Chain Progress



Work over the period has continued on the 3 key fronts:

- **Embedding** a community based strategy from the 'bottom up', creating local trust relationships which effectively earn the project team the right to engage the community on the energy agenda;
- **Building** the process of change working with the community to co-design and deliver a range of energy saving interventions aimed at changing local consumption behaviour;

- **Monitoring and analysis** of research data – both quantitative and qualitative – to demonstrate and underpin sustained behaviour change.

Good progress has continued to be made on all 3 fronts through Trial Period (TP) 2. In relation to 'Monitoring and analysis' in particular however, persistent issues with substation / feeder monitoring data and the statistical validity that can be gained from this have presented challenges in achieving the intended balance between the use of quantitative and qualitative data through the remainder of the research period to December including TP3. Discussions amongst the project partners on this is continuing with a view to final options appraisal and decision on the way forward at the Project Partner Review Board (PPRB) meeting in July.

Reviewing the current situation on each of these fronts in more detail:

**(a) In terms of 'community-based strategy'** (the so-called 'distinctive, dedicated strategy' or DDS):

- Local websites and associated social media channels continue to operate as a frontline means of local communication. Project staff have taken the lead on updating to date, with a view to this being transferred progressively to local residents:
  - [www.connectingkingsworthy.org.uk](http://www.connectingkingsworthy.org.uk)
  - [www.shirleywarren.org.uk](http://www.shirleywarren.org.uk)
- The local coordinating groups in each area have been active in co-designing the local energy-based intervention programme alongside the local development strategies. Building upon the trust relationships now established, the Coaches are systematically seeking convergence between the local development strategies and the energy reduction agenda, the latter now being embodied in the 'Lightbulb Challenge programme as a more readily accessible (and potentially replicable / BAU) expression of DSR activity.
- The appointment of a successor Kings Worthy coach in January 2017 has prompted a review of the engagement approach in that area so that the trials can 'piggy back' as much as possible upon existing events and activities rather than creating our own. This reflects the relative 'busy-ness' of residents who although keen to be involved and offer support are already committed to numerous other local activities and as such are happy to help at a more strategic rather than hands on level.
- This has highlighted an interesting contrast between the two trial communities where in Kings Worthy it was relatively easy to gain support initially but is proving harder to translate that into 'hands on' help on the ground for local events and activities – hence the need to 'piggy back'. Whereas, in Shirley Warren it was a real challenge to find a way in to the community but, having done so, there is a real desire from residents to get involved and make a difference where there is currently very little else 'on offer'.
- Local highlights in each trial area include:









- Shirley Warren Working Together: the formal constitution of the SWWT group took place in March 2017 with local people stepping forward to take on committee roles; committee training for the new group took place in May; the third clean-up weekend took place in March and a fourth is planned for 10 June, with organising responsibility now being transferred to SWWT office bearers; a Money Saving Event linked to the launch of the Lightbulb Challenge took place on 1 April; a phased programme for development of an 'All-community Action Centre' including the drop-in café has been formulated; and ongoing promotions to recruit to proposed Focus Groups has been taking place;
- Connecting Kings Worthy: an Energy Café event was held in the local school in February; building on the earlier walking map, a 'welcome map' has been designed and delivered to each household in the area following a promotional event on 25 March linked to the launch of the Lightbulb Challenge; a home energy challenge has been undertaken with the KW guides; awareness raising activities have been promoted via the School Fair and Church Fair events held in May; further development has taken place of ideas around a defining 'convergence' vision for the future of the area as a legacy of the project; along with ongoing recruitment to the proposed Focus Groups.
- Building upon conversations with the SSEN Stakeholder Team regarding Stakeholder Engagement and Consumer Vulnerability (SECV) obligations, NEL has agreed to explore how the relative Priority Service Register (PSR) sign up levels could be substantially increased in collaboration with the local community as a natural extension of the embedded project strategies. Test activity will seek to; (i) compare and contrast the relative impact between the respectively urban / disadvantaged and rural / affluent communities; (ii) understand the role of the 'messenger' (SSEN v local source) in impacting sign up rates and; (iii) explore the perceived value of PSR on behalf of particular 'needs groups' and how this might be enhanced through alternative, dedicated messaging and communication formats.

**(b) In terms of energy saving interventions:**

- Formal co-design sessions have been instrumental in distinguishing a number of drivers for change, notably; in terms of 'cutting' consumption - **'save money' or 'save the planet'** - and, in terms of 'shifting' consumption - **'support your network' or 'support your community'**;
- Through further consultation and discussion as part of the local co-design process, the latest hypothesised Energy Test Programme is now summarised in Table 2 below. The next procedural step is to formally integrate this with DDS-related interventions to create an overall Trial Intervention Programme focused on convergence and legacy, elements of which will offer opportunities for replicable / BAU application.;



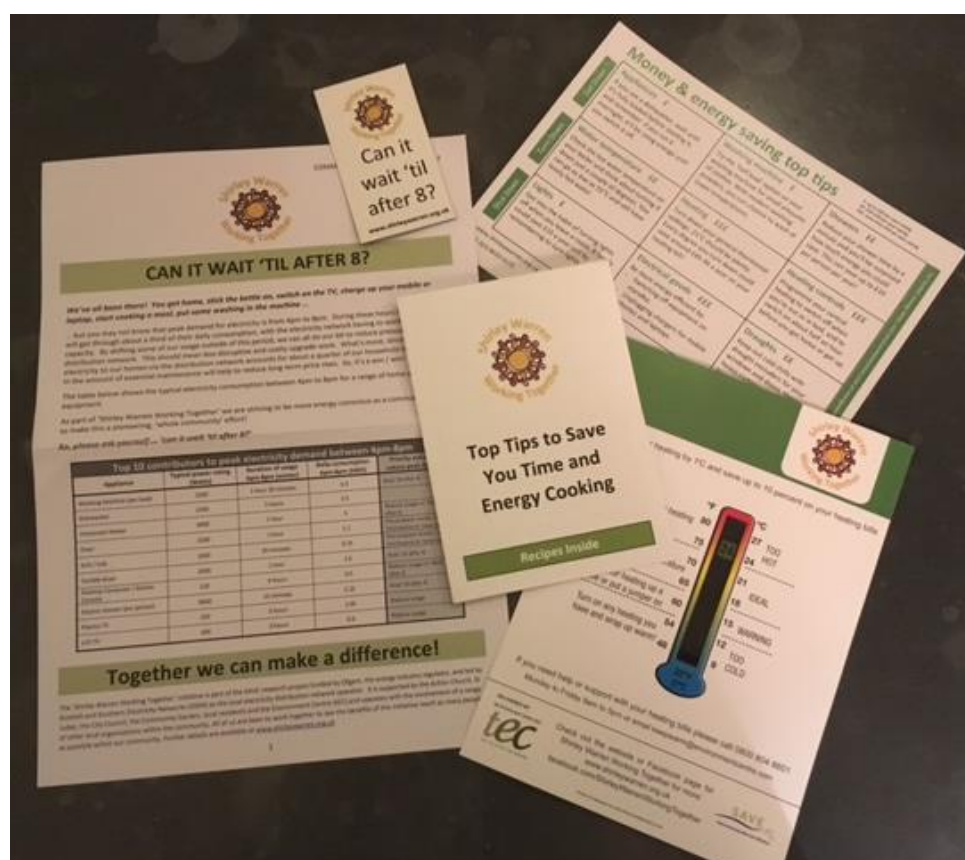
**Table 2 Trial Strategy**

Summary of Planned Actions			Substation/ feeder data	Part of Lightbulb Challenge
<b>Awareness raising</b>				
1	<b>Website</b>	Using the website set up to support the local DDS strategies in the trial areas, building on opportunities for general awareness raising regarding energy efficiency and resident involvement including volunteering opportunities		
2	<b>Lightbulb Challenge Programme</b>	A development of the Awards Programme idea to provide a 'catch all' engagement framework for the energy saving 'change agenda' within the trial communities. Awareness raising activities to include a range of web-site based promotions (Top Tips / 'SAVE' hour / Go 'Off Grid') and local 'Roadshow' events building upon the wider DDS work		
<b>Impact Measurement</b>				
3	<b>Baseline Response</b>	Checking the relative participation response levels before (and optionally) after widespread interactivity		
4	<b>Direct Asks</b>	Selecting clusters of households at feeder level and asking them to take certain actions to cut measured demand at certain times	✓	
5	<b>Big Switch Off</b>	A dedicated 'demand reduction challenge' urging a collective, community-wide response, the impact of which can be monitored at substations / feeders. This will be the culmination of the Lightbulb Challenge with a date set for Saturday 25 November 2017 (4-8pm)	✓	
6	<b>Competitions</b>	With a number of 'neighbourhood teams' taking part in competitive trials to shift measured 4-8pm demand over a 6 week period	✓	
7	<b>Ambient Effect</b>	Background monitoring during Trial Intervention Period 3 to assess whether there is any discernible evidence of widespread DSR (either 4-8pm or overall) across the trial communities as measured at substations / feeders	✓	
8	<b>Priority Services Register</b>	Exploring how the relative PSR sign up levels could be substantially increased in collaboration with the local community as a natural extension of the current DDS work		
<b>Focus Groups</b>				
9	<b>Qualitative Feedback</b>	Through a combination of door step survey and focus group activity, aiming to add value to other household based trials to explain why particular outcomes are observed, exploring how residents may have reacted to set interventions and why certain courses of action may have been chosen. This activity will potentially inform the more formal 'Messaging' focus groups		
10	<b>Messaging</b>	Establishing a number of differentiated Focus Groups within each trial area to test 'energy literacy' - leading to a clearer understanding of what will constitute a compelling narrative likely to underpin widespread behaviour change and also practical steps which can 'make it real' in terms of responding to the aspiration to be part of a local community initiative.		
11	<b>Convergence</b>	Exploring new ways of working, looking at how to organise better for energy efficiency at the community level, that is, how the DDS generally and the Energy strand specifically can effectively converge as part of an integrated, locally branded initiative underpinning commercial or partnership based opportunities to sustain demand reduction activity in the trial areas		

### 2.3.1 Trial Period 2 (TP2) Results

- TP2 interventions, notably the 'Direct Ask' tests, are now complete. Alongside the TP2.0 'cut asks' (as previously reported), the TP2.5 'shift asks' have also been delivered via 3 tailored letters being sent to c170 households at intervals over the January-March period utilising the local strategic branding ('Connecting Kings Worthy'(CKW) / 'Shirley Warren Working Together'(SWWT)) as distinct from the DNO branding.
- Each of the cut and shift asks were accompanied by a 'freebie' which were designed by NEL/local partners drawing upon the draft DNV GL/Behaviour Change design platform but adapted following local feedback. Using the local CKW/SWWT branding they proved very popular with residents in both communities.

Figure 10 Engagement Material



- The hypothesis was that we may detect up to 5% demand reduction at feeder monitoring level attributable to specific 'asks'. Initial analysis of the feeder monitoring data reveals no attributable reduction in measured consumption, hence the aforementioned options appraisal process moving forward into TP3;
- In January 2017, the CEC trials conducted a mid-point doorstep questionnaire survey of households targeted through the TP2.0 (cut) interventions. Summary qualitative feedback is set out in Figure 11 below.


Figure 11 Qualitative Feedback

Summary Responses to date			'Cut' Interviews: key learning points		
Interview Response Rates (Door knock Returns)					
	SW	KW		SW	KW
Total h/h	170	170	No of interviewees	36/100	51/100
Total Questionnaire returns	36 (21%)	51 (30%)	Q1 Heard of CKW / SWWT	31/86	46/90
Agree follow up – definite	13	16	Q2 Aware of Letters	33/92	41/80
Agree follow up – maybe	10	16	Q3 Respond to challenges	21/58 (= yes + partly)	26/51 (= yes + partly)
Contact info:	23	32	Q4 Particular challenges responded to	14/39 – already efficient	16/31 – already efficient
• Email	8	17	Q5 Actions taken	8/22 – heating 7/19 – washing 11/31 - lights 7/19 - standby	6/12 – heating 8/16 – washing 6/12 - lights 5/10 - standby
• Mobile	7	3	Q6 Whole family involved	13/36 (= yes + partly)	20/40 (= yes + partly)
• Email + mobile	-	2	Q7 Information seen as helpful	29/80 (= yes + partly)	35/67 (= yes + partly)
• Landline	3	3	'Thermometer cards especially good'		
• Email + landline	-	1			
• Address only	5	6			


### 2.3.2 Trial Period 3 (TP3)

- As the trial moves towards TP 3 (October – December 2017), the Lightbulb Challenge (LBC) is now seen as the primary focus for energy-related activity within the trial communities. The LBC is a development of the original Awards Programme as discussed as part of the local co-design process. The idea is to provide a 'catch all' engagement framework for the energy saving 'change agenda' within the trial communities. NEL anticipate that the Programme may offer a basis for wider BAU replication as a cost-effective DSR engagement tool. The LBC was formally launched in the two trial communities in March / April. A copy of the LBC leaflet is included below:
- As part of the LBC a number of targeted focus groups are planned from July to support development of the detailed messaging and the widening engagement needed for the final trial period. Active recruitment is currently taking place in both communities for 'new' people to join these groups with a 'convergence' dissemination event planned for early autumn with key local stakeholders.

Figure 12 The Lightbulb Challenge




## The Lightbulb Challenge 2017




A series of community events and activities exploring how we can ... use less energy ... especially between 4-8pm ... while involving the whole community ... and improving well-being for all

**Together we can make a difference!**  
[www.shirleywarren.org.uk](http://www.shirleywarren.org.uk)


### Let's challenge ourselves to...

<b>TOP TIPS</b> ...share your best energy saving ideas. Post your Top Tips on the 'Shirley Warren Working Together' Facebook page  <a href="http://www.shirleywarren.org.uk">www.shirleywarren.org.uk</a>	<b>THE 'SAVE' HOUR</b> ...make it a habit every Saturday between 7-8pm to use as little electricity as possible. Sign up to the weekly 'SAVE' hour: <a href="http://www.shirleywarren.org.uk">www.shirleywarren.org.uk</a>	<b>FOCUS GROUPS</b> ...get involved in one of our local focus groups aimed at maximising positive impact on the whole community. Call the SWWT Team on 02380 336172 to find out more
<b>GO 'OFF-GRID'</b> ...at least once a month choose to do something between the hours of 4-8pm which avoids using electricity within the home - check <a href="http://www.shirleywarren.org.uk">www.shirleywarren.org.uk</a> for ideas	<b>VOLUNTEERING</b> Find out about current opportunities for volunteering with 'Shirley Warren Working Together' for a few hours a week - check <a href="http://www.shirleywarren.org.uk">www.shirleywarren.org.uk</a> for details	<b>ROADSHOW</b> ...arrange for the 'Lightbulb Challenge' Roadshow to visit local organisations / groups to learn more about how to make an impact. Call the SWWT Team on 02380 336172
<b>WAIT 'TIL AFTER 8</b> ...shift our consumption as much as possible away from the daily peak period of 4-8pm. Check out the 'Can it wait 'til after 8?' Factsheet: <a href="http://www.shirleywarren.org.uk">www.shirleywarren.org.uk</a>	<b>COOKING TIPS</b> ...avoid cooking in the 4-8pm peak period. Batch cooking, slow cookers, microwaves can all play their part. For recipe ideas and tips: <a href="http://www.shirleywarren.org.uk">www.shirleywarren.org.uk</a>	<b>PRIORITY REGISTER</b> ...ensure those needing extra help in a power cut (older people, those with medical needs or children under 5) sign up to the Priority Register - see <a href="http://www.ssen.co.uk/priorityservices">www.ssen.co.uk/priorityservices</a> for details



**...join in the  
'BIG SWITCH OFF'**

**4-8pm on Saturday 25 November 2017**



Let's see just how much electricity we can save across the whole community during the peak period between 4-8pm when we really try! The impact will be measured at our local substations.

The 'Shirley Warren Working Together' initiative is part of the SAVE research project funded by Ofgem, the energy industry regulator, and led by Scottish and Southern Electricity Networks (SSEN) as the local electricity distribution network operator. It is supported by the Action Church, St Jude's, the City Council, the Community Garden, local residents and the Environment Centre (tEC) and operates with the involvement of a range of other local organisations within the community. All of us are keen to work together to see the benefits of this initiative reach as many people as possible within our community.

(c) In terms of monitoring and analysis:

- The key issue on this front is the ongoing discussion between NEL and project partners regarding the most effective and achievable balance between quantitative and qualitative data through the remainder of the research period to December including TP3. Persistent underlying issues around the appropriate recording of substation / feeder monitoring data continue to be addressed in discussions amongst the project partners. NEL has put together a Situation Statement (May 2017) containing indicative options with a view to final decision on the way forward being taken at the PPRB meeting in July;
- Depending whether the outstanding Community Energy Coaching test programme is focused more on quantitative or qualitative learning, elements of the Energy Test Programme, notably for TP3, may be re-designed accordingly. In any event, efforts will be made to maximise the opportunities for integrated learning across all four Trial Methods under SAVE.

The set milestones for Trial 4 (by the end of June 2017) included:

- Trial period 2 (2.0 / 2.5) will be complete with a hypothetical, measurable demand reduction of the order of 5% through focused interventions and follow up learning outcomes – as per target, TP 2 is now complete albeit there were no observed demand reductions at feeder level, to be resolved as referenced;

- One or more commercial / partnership based opportunities should be identified to sustain demand reduction activity within the trial communities – as per target, one Partnership-based opportunity has now been identified, namely through the formal constitution of Shirley Warren Working Together (SWWT).

### 3 Consistency with full submission

*Ofgem guidance: The DNO should confirm that the Project is being undertaken in accordance with the full submission. Any areas where the Project is diverging or where the DNO anticipates that the Project might not be in line with the full submission should be clearly identified. The DNO should also include, where appropriate, references to key risks identified under "Risk Management".*

The SAVE project is being conducted in accordance with the full submission. To ensure all commitments from this submission are completed in a timely and efficient manner, the Project has developed a comprehensive structure with clear linkages to the text of the full submission. The project has linked this with its wider work breakdown structure (WBS) assigning ownership and providing clarity to all key project contributors.

The project has not made any change requests in this reporting period and has no plans to do so during the next reporting period.



## 4 Risk management

*Ofgem guidance: The DNO should report on the risks highlighted in box 26 of the full submission pro forma, plus any other risks that have arisen in the reporting period. DNOs should describe how it is managing the risks it has highlighted and how it is learning from the management of these risks.*

The Project risk register is a live document designed to identify actual and potential barriers to the satisfactory progress of the SAVE project. The register is used to target resources and to develop control measures and mitigations. The SAVE risk register is a single log of risks as identified by SSEN, University of Southampton, DNV GL, Future Solent and Neighbourhood Economics. The register is reviewed at the monthly Project Partner Review Boards and is reported to the SSEN Project Steering Group.

Risks are assessed against their likelihood and impact, where the impact considers the effect on cost, schedule, reputation, learning, the environment and people. Risks are scored before (inherent) and after (residual) the application of controls. Risks which are closed are removed from the live register, with any learning captured through the Learning Moments and Project Trials described in section 7.

Increased focus is placed on risks with amber or red residual scores and also on all risks with a red inherent score (to ensure there is no over-reliance on the controls and mitigation measures). At present there are 9 risks that fall into this category. These risks and how we are managing them are shown below:

Risk ref #	Source	Status	Risk Description	Inherent							Risk Control/Mitigation Actions	Residual							Inherent			
				Impact								Impact							Score	Contingency (£k's)	Contingency lay (wks)	Score
				st	hedule	putation	arning	vironm	ople	telhood		st	hedule	putation	arning	vironm	ople	telhood				
WP1-3	SEPD	Active	Lack of budget to complete project and over spend on budget	5	5	3	5	1	1	4	Corrective actions process being fully assessed with due diligence as to cost applied throughout construction. SSEN Legal and procurement teams supporting process how ever core concern that costs will exceed current project budget resulting in direct cost being passed to SSEN or detailed in CR-2 to request additional funds from Ofgem .	4	4	3	3	1	1	3	20	93.7	2.3	12
WP1-5	SEPD	Active	Lack of data available from the Trial zones and an overall lack of learning to SEPD.	4	4	4	5	1	1	3	Corrective actions following acceptance of CR-2 mitigated previous equipment issues. TG4 providing learning through live trials, TG's 1, 2 and 3 commenced live trials in January. Equipment functioning correctly across sample and small scal comms issues being corrected.	4	4	3	3	1	1	2	15	4.7	0.1	8
WP1-6	SEPD	Active	Lack of availability of suitable learning from the SAVE project	1	1	4	5	1	1	2	Regular reviews of this important area will continue, with escalation through the ISB to address if necessary. Both UoS and DNV GL are continuously reviewing learning objectives and all SAVE contributors capture ad-hoc learning as a BAU task. Interaction with wider DNO stakeholders to ensure building upon wider learning	1	1	4	1	1	1	2	10	0.0	0.0	8
WP2-3	SEPD	Active	Failure of equipment and lack of data	4	4	3	5	1	1	2	Corrective actions follow ing acceptance of CR-2 mitigated previous equipment issues. TG4 providing learning through live trials, TG's 1, 2 and 3 commencing live trials in January. New equipment functioning correctly across sample and small scal comms issues being corrected.	3	3	4	4	1	1	2	10	0.5	0.0	8
WP3-6	SEPD	Active	There are issues with the technology monitoring equipment (substation / domestic) and there is not enough data to gain meaningful results on the impact on energy usage and therefore the network model cannot assess the impact of the interventions.	1	1	4	5	1	1	4	Substation monitoring equipment is functioning correctly and all data requirements have been agreed between UoS, EATL and SSEN. New household monitoring equipment is functioning to expectation and providing granular detail to the project.	1	1	3	4	1	1	3	20	2.3	0.2	12
WP4-1	UoS	Active	Attrition/Opt-out rates continue to grow with adverse impacts on the leave of reduction needed for statistical significance	3	2	3	4	1	1	4	Regular reviews and updates in addition to identification of potential causes for attrition. Analysis shows trial material not the cause of attrition. CBA of additional incentivisation or re-recruitment. Budget being retained for additional recruitment prior to TP2. Factorial approach an option if numbers drop too low	2	2	2	3	1	1	3	16	23.4	0.4	9
WP5-12	SEPD	Active	Due diligence on SIM-Based solution with Navetas Clamp - Navetas clamp needs to be integrated with the SIM solution and tested for reliable data transfer	3	3	4	4	1	1	3	Firmw are updates have improved performance of ASUS units.	2	3	3	3	1	1	3	12	2.3	0.1	9
WP5-13	SEPD	Active	Note that some loop monitors are being removed as a result of smart meter installs across Solent	3	2	2	4	1	1	4	Keep a close log on comms status. Contact smart meter suppliers to inform them of project. Contact has been established at Association of Meter Operators to try and spread message of SAVE kit.	3	2	2	3	1	1	3	16	23.4	0.4	9
WP9-3	SEPD	Active	Commercial support not available to define DNO effect/outcomes of Price Signalling WP resulting in lack of learning collection	1	3	3	4	1	1	4	Resource discussions and requirements defined, ability to draw on non-innovation team assistance and contracted support available should direct resource not be available. Budget set aside to look at consultant support.	1	2	2	4	1	1	2	16	2.3	0.7	8

## 5 Successful delivery reward criteria (SDRC)

*Ofgem guidance: The DNO should provide a brief narrative against each of the SDRCs set out in its Project Direction. The narrative should describe progress towards the SDRCs and any challenges the DNO may face in the next reporting period.*

The SAVE project has identified ten Successful Delivery Reward Criteria (SDRC) in Table 3 below. The majority of these are split into a number of sub components and each component has defined criteria, evidence and a target date for completion. The following table lists the individual SDRC components in chronological order and details the Project's progress towards their achievement for those due to be completed in this reporting period (up to June 2017) and into the next reporting period (up to December 2018).

Completed (SDRC met)	Emerging issue, remains on target	SDRC completed late
On target	Unresolved issue, off target	Not completed and late

**Table 3 SDRC Delivery**

SDRC	Due	Description	Status
SDRC 3.1	28/02/2014	Create Customer Engagement Plan	Complete – submitted to Ofgem on 28/02/2014
SDRC 8.9	19/06/2014	6 monthly Project Progress Report	Complete - and due to be submitted every 6 months until end of the Project
SDRC 1	30/06/2014	Produce report on learning from UK and international energy efficiency projects and the impact on the design and implementation of the SAVE project	Complete – submitted to Ofgem 30/06/2014
SDRC 8.9	19/12/2014	6 monthly Project Progress Report	Complete - and due to be submitted every 6 months until end of the Project
SDRC 2.1	31/12/2014	Create initial customer model	Complete – submitted to Ofgem 31/12/14
SDRC 7.1	31/12/2014	Create initial network model and parameters for tool	Complete – submitted to Ofgem 31/12/14
SDRC 8.9	19/06/2015	6 monthly Project Progress Report	Complete - and due to be submitted every 6 months until end of the Project
SDRC 5	30/06/2015	Identify control and sample groups	Complete – submitted to Ofgem 30/06/15
SDRC 6	30/06/2015	Install 80% of clip-ammeter	Complete – submitted to Ofgem 30/06/15
SDRC 4	30/06/2017	Create commercial energy efficiency measures	On target- to be submitted to Ofgem 30/6/17
SDRC 2.2	31/12/17	Revise Customer Model	On target, monthly meetings begun- to be submitted to Ofgem Dec 17
SDRC 7.2	31/12/17	Revise Model and Tool	On target, monthly meetings begun- to be submitted to Ofgem Dec 17

Beyond the next reporting period, the following table lists the remaining SDRCs in chronological order:

SDRC	Due	Description
SDRC 3.2	31/01/2018	Hold meetings to share progress, experiences and next steps with customers involved in trials on a six monthly basis
SDRC 2.3	31/05/2019	Finalise customer model
SDRC 7.3	31/05/2019	Finalise network investment tool
SDRC 8.1	29/06/2019	Produce project closure report
SDRC 8.2	29/06/2019	Produce network investment tool key outcomes report (including comparison of trial method

		impacts)
SDRC 8.3	29/06/2019	Produce LED trial report
SDRC 8.4	29/06/2019	Produce DNO price signals direct to customers trial report
SDRC 8.5	29/06/2019	Produce network pricing model report
SDRC 8.6	29/06/2019	Produce customer and network modelling report
SDRC 8.7	29/06/2019	Produce data-informed engagement trial report
SDRC 8.8	29/06/2019	Produce community coaching trial report

## 6 Learning outcomes

*Ofgem guidance: The DNO should briefly describe the main learning outcomes from the reporting period. It should update Ofgem on how it has disseminated the learning it generated as part of the Project over the last six months*

The learning objectives for the Project are:

- to gain insight into the drivers of energy efficient behaviour for specific types of customers
- to identify the most effective channels to engage with different types of customers
- to gauge the effectiveness of different measures in eliciting energy efficient behaviour with customers
- to determine the merits of DNOs interacting with customers on energy efficiency measures as opposed to suppliers or other parties

These will be answered as a result of carrying out the following project objectives:

- Create hypotheses of anticipated effect of energy efficiency measures (via commercial, technical and engagement methods)
- Monitor effect of energy efficiency measures on consumption across range of customers
- Analyse effect and attempt to improve in second iteration
- Evaluate cost efficiency of each measure
- Produce customer model revealing customer receptiveness to measures
- Produce network model revealing modelled network impact from measures
- Produce a network investment tool for DNOs
- Produce recommendations for regulatory and incentives model that DNOs may adopt via RIIO

### 6.1 Learning Outcomes

There have been no SDRCs completed within this reporting period, however trials have continued to take place, with the coordination and analysis of data from these trials and plans for next iterations taking up a significant amount of time. SDRC 4 'Create commercial energy efficiency measures' is due in June 2017, so the bulk of several partners' focus has been on delivering the necessary analysis to support this submission. These will be fully reported on in the next 6 monthly submission.

Nonetheless, a number of findings have been revealed during the period, these are noted in the following section.

### 6.2 Learning Moments

The following 'Learning Moments' have been recorded during this reporting period:

- There is evidence of Saturday & Sunday evening peak consumption being similar to weekday consumption (although the peak appears slightly earlier in the day). This has been confirmed by further data analysis and via consultation with Dr Stephen Haben (University of Oxford).
  - Significant evidence from winter 2016/17 data indicates that the weekly peak occurs on Sunday's (this is consistent across the data gathered excluding Christmas Day).
- There has been no clear evidence as yet of differences in response rates between trial groups neither at the start of Trial Period 1 nor after five weeks of interventions.
- The time use survey process appears to be efficient, taking an average of 10-12 minutes. There is however a significant percentage of the project population (approx. 10%) that despite 20+ attempts BMG are unable to establish contact- different mediums including text and post are being explored.
- Analysis of attrition suggests that there are no effects as a result of being part of one particular group.
- The randomised control trial approach being used in the project has been validated thanks to the academic paper published in December 2016 which makes recommendations for such an approach (<http://dx.doi.org/10.1016/j.erss.2016.08.020>).
- The Trial Period 1 data shows distinct differences between load profiles for different kinds of main heat sources and some differences for households with children and retired vs working participants.
- It is very difficult to design a 'success metric' at the individual household level for demand reduction as it is unclear what to compare to especially given seasonal trends in energy demand reduction (see <http://www.sciencedirect.com/science/article/pii/S0378779616301043>)
- The take-up of LEDs offered at the start of the intervention for the LED trial group was very low. The number of visits to the website recommended to the participants in that trial group was higher but still smaller than expected, leading to a need to change the approach for the next iteration.
- The number of participants seeking removal from the project mailing list is only a small percentage of the trial population, encouraging us to continue using postal and digital mail to communicate with participants.
- It is likely that individual successes at the Event Day (which focussed on significant behaviour change) was influenced by warmer/longer days (overall 1082 out of 1847 achieved the event target, in group 2 this was 570 and in group 3 512, signifying no initial impact of price signals).
- When 'offline' (as a result of power or communications being interrupted) the Navetas monitoring equipment will interpolate consumption across the period until communications is resumed, resulting in a straight line of consumption across this period. Data availability in 'offline' instances should be clearly investigated to understand any impacts on quality. This is particularly useful for other projects or initiatives looking at monitoring customer consumption.
- Some participants have revealed that having more contact than anticipated (primarily telephone-based) was a reason for leaving the trials. This indicates the delicate balance between appeasing customers who want to remain informed at all times, and those who would

rather have minimal contact. Future undertakings should be clear on anticipated level of contact during initial engagement with potential participants

- Whilst decoupling the installation and recruitment processes was agreed to mitigate the risks to recruitment from the initial monitoring equipment failures, this should not be repeated as the effort to re-join these is significant
- The significant amount of time and effort required for issuing and logging vouchers, as well as dealing with claims of non-issue from customers can be eliminated by issuing debit-style cards which can be posted to customers as prepaid cards or only activated once they've completed a survey or action.
- When targeting customers to encourage uptake of a given technology (i.e. LED lighting) time should be spent ensuring websites are easy to navigate, clear and look professional. In Trial Period 1 of the LED trials, one participant noted that they thought the cost of the LED bulbs were high until they noticed that the cost was for multipacks and not single bulbs.

### 6.3 Dissemination Activities

The table below shows the main dissemination activities which have been completed in this period:

Leading Partner	Date(s)	Description
SSEN	12/02/2017	As part of NTVV internal training in which 6 events were held (4 in south, 2 in North) it was discussed how LO's from NTVV were feeding into SAVE and a brief project overview was given
SSEN	02/03/2017	Project findings published in the Rough Guide to Engaging Communities in Energy Network Innovation <a href="https://www.regensw.co.uk/rough-guide-to-engaging-communities-in-energy-network-innovation">https://www.regensw.co.uk/rough-guide-to-engaging-communities-in-energy-network-innovation</a>
SSEN	28-29/03/2017	Project approach referenced during NTVV & NINES closedown event
SSEN	06/04/2017	E-mails sent to contacts across UK introducing SAVE and offering opportunities to build on their projects and share our learning
SSEN	25/04/2017	Project discussed with SSEN Smart Metering Programme team and the value of evidence that could be gathered from project in relation to elements like DSR trials and issuing price signals
SSEN	28/04/2017	Liaised with the Association of Meter Operators to outline SAVE and issues associated with the removal of Navetas Loop as a result of smart meter installs.
UoS	10/05/2017	3 minute 'lightning talk' given at a 'Clean Carbon' Event as part of University of Southampton's Clean Carbon University Strategic Research Group (USRG)
DNV GL	10/05/2017	Open day with data informed engagement trial participants
DNV GL	11/05/2017	Open day with price signals trial participants
SSEN	04/05/2017	The project has engaged suppliers through Energy UK and those party to DCUSA to understand stand-point on time of use (ToU) tariffs.

## 7 Business case update

*Ofgem guidance: The DNO should note any developments or events which might affect the benefits to be gained from the Second Tier project. Where possible the DNO should quantify the changes these developments or events have made to the Project benefits compared to those outlined in the full submission proposal.*

SSEN's core purpose is to provide the energy people need in a reliable and sustainable way. To achieve this, our delivery priority is to deliver upgraded electricity transmission networks and operational efficiency and innovation in electricity distribution networks as they respond to the decarbonisation and decentralisation of energy. The learning from the SAVE project will inform our strategy to deliver on this priority with the aim of supporting our core purpose.

Through these trials, SSEN hopes to quantify the most cost effective approach to having a measurable change in the operation of the distribution system and develop means of controlling demand reduction in order to be able to rely on the demand reduction to defer or avoid network reinforcement.

Drawing on previous research and project learning the Project expects to see reductions of between 10-15% in overall electrical consumption for the interventions being trialled, although this reduction and potential benefit to the networks is expected to vary depending on multiple variables.

Expected reductions achieved as a result of the interventions being trialled in the Project are shown below, with further scenarios detailed in the full submission proposal.

Average annual household consumption (kWhs per year)	4,226	4,226	4,226	4,226
<b>Measure</b>	<b>LEDs (TG2)</b>	<b>Data informed engagement (TG4)</b>	<b>DNO rebates (TG3)</b>	<b>Community Coaching (CEC)</b>
Average annual household lighting consumption (kWhs per year)	634			
Expected total reduction (%)	10.5	11	15	15
Expected annual reduction (kWhs per year)	444	465	634	634
Expected hourly reduction (kWhs)	0.05	0.05	0.07	0.07
Expected hourly reduction (Watts per hour)	5	5	7	7
Expected daily reduction (Watts per day)	122	127	174	174

<b>Small Low Voltage Urban reinforcement</b>	<b>LEDs (TG2)</b>	<b>Data informed engagement (TG4)</b>	<b>DNO rebates (TG3)</b>	<b>Community Coaching (CEC)</b>
Daily reduction on LV cable with 150 customers (kW)	18	19	26	26
Rating of circuit (kW)	200	200	200	200
Headroom made available (%)	9.12	9.55	13.03	13.03
Equivalent to connection a number of 3kW heat pumps or EVs now able to connect (without diversity)	6	6	9	9



SSEN has not noted any developments or events which might affect the wider business case outlined above and as detailed in the full submission proposal.

## 8 Progress against budget

*Ofgem guidance: The DNO should report on expenditure against each line in the Project Budget, detailing where it is against where it expected to be at this stage in the Project. The DNO should explain any projected variance against each line total in excess of 5 per cent.*

Project expenditure is within the budget defined in the Project Direction. The table below details expenditure against each line in the Project Budget and compares this with planned expenditure to date<sup>6</sup>. Projected variances are also listed for changes >5%.

	Budget	Expenditure ITD	Comparison with expected expenditure	Projected Variance (at project conclusion)		
				(£K)	%	#
<b>LABOUR</b>	£1,848,320	£482,859.64	77%	0	0	
<b>EQUIPMENT</b>	£1,015,000	£951,658.02	94%	0	0	
<b>CONTRACTORS</b>	£5,085,350	£2,584,751.72	79%	0	0	
<b>IT</b>	£586,850	£588,508.38	104%	0	0	
<b>TRAVEL &amp; EXPENSES</b>	£26,400	£18,259.91	91%	0	0	
<b>PAYMENTS TO USERS</b>	£472,300	£218,014.03	77%	0	0	
<b>DECOMMISSIONING</b>	£206,930	£0	-	0	0	
<b>OTHER</b>	£402,530	£0	-	0	0	

Notes: The budget totals used are reflective of the new SAVE budget structure, detailed in Formal Change Request CR-2 and agreed by Ofgem in July 2016.

<sup>6</sup> Expenditure is compared with a dynamic assessment of project phasing which reflects the nature of specific contract payments and physical delivery milestones. A comparison of expenditure with phased budget will often indicate a payment lag due to the nature of invoicing processes.

## 9 Bank account

*Ofgem guidance: The DNO should provide a bank statement or statements detailing the transactions of the Project Bank Account for the reporting period.  
Where the DNO has received an exemption from Ofgem regarding the requirement to establish a Project Bank Account it must provide an audited schedule of all the memorandum account transactions including interest as stipulated in the Project Direction.*

Transaction details for the SAVE Project Bank account during this reporting period are listed in the Appendix. This extract has been redacted to protect the financial details of transacting parties; the full, un-altered copy has been submitted in a confidential appendix to Ofgem.

A summary of the transactions to date are shown in the table below:

Description	Totals (June 2016 – December 2016)
Payments out of account	-£605,585.36
Interest	£6035.05
<b>Balance</b>	<b>£4,529,005.25</b>

## Intellectual Property Rights (IPR)

*Ofgem guidance: The DNO should report any IPR that has been generated or registered during the reporting period along with details of who owns the IPR and any royalties which have resulted. The DNO must also report any IPR that is forecast to be registered in the next reporting period.*

In commissioning project partners to commence project activities, the SAVE project has applied the default IPR treatment to all work orders (as defined in the Low Carbon Networks Fund Governance Document version 7). This will ensure IPR which is material to the dissemination of learning in respect of this project is controlled appropriately.

Within the December 2016- June 2017 reporting period, project partners Neighbourhood Economics (NEL) developed within the project the Foreground IPR of the 'Lightbulb Challenge' (see section 2.3) building upon their background IPR of sustainability indexing brought to SAVE at the start of the project. As the project evolved, the decision was made that the sustainability indexing approach may not be the best means to measure and engage communities under the CEC trials and as a result the 'Lightbulb Challenge' materialised.

This Foreground IPR will be used by NEL solely in connection to the project up until closedown in June 2019. The background IPR is deemed owned by NEL to use as they wish.

No Relevant Foreground IPR is forecast to be registered in the next reporting period. The SAVE project intends to gather details of IPR through the structure of individual project trials. Specifically, in concluding project activities the following details will be gathered: 1) components required for trial replication and, 2) knowledge products required for trial replication.

## 10 Other

*Ofgem guidance: Any other information the DNO wishes to include in the report which it considers will be of use to Ofgem and others in understanding the progress of the Project and performance against the SDRC.*

No further details.

## 11 Accuracy assurance statement

*Ofgem guidance: DNO should outline the steps it has taken to ensure that information contained in the report is accurate. In addition to these steps, we would like a Director who sits on the board of the DNO to sign off the PPR. This sign off must state that he/she confirms that processes in place and steps taken to prepare the PPR are sufficiently robust and that the information provided is accurate and complete.*

This Project Progress Report has been prepared by the Project Manager and reviewed by the Project Delivery Manager before sign-off by the Director of Engineering, who sits on the Board of SSEN.

This report has been corroborated with the monthly minutes of the Project Steering Group<sup>7</sup> and the Project Partners Review Board to ensure the accuracy of details concerning project progress and learning achieved to date and into the future. Financial details are drawn from the SSE group-wide financial management systems and the Project bank account.

Prepared by:	Charlie Edwards	SAVE Project Manager
Reviewed by:	Stewart Reid	Head of Asset Management & Innovation
Final sign off:	Andrew Roper	Director of Engineering & Investment

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<sup>7</sup> The Project Steering Board meets as part of an overall SSEN Innovation Steering Board

## Appendix - Redacted copy of bank account transactions

## Bankline



Statement for account \*\*\_\*\*\_\*\* \*\*\*\*\* from 01/12/2016 to 31/05/2017

Short name:	SOUTHERN ELECTRIC PO	Currency:	GBP
Alias:	SOUTHERN ELECTRIC PO	Account type:	CORP CASH MANAGER PL
BIC:	*****	Bank name:	NATIONAL WESTMINSTER BANK
IBAN:	*****	Bank branch:	READING MKT PLACE

Date	Narrative	Type	Debit	Credit	Ledger balance
	<b>CLOSING BALANCE</b>				<b>4,529,005.25Cr</b>
31/05/2017	31MAY-GRS *****	INT		417.47	4,529,005.25Cr
30/05/2017	SOUTHERN ELECTRI SAVE COSTS	EBP	91,615.33		4,528,587.78Cr
28/04/2017	SOUTHERN ELECTRI SAVE COSTS	EBP	97,637.25		4,620,203.11Cr
28/04/2017	28APR-GRS *****	INT		361.89	4,717,840.36Cr
31/03/2017	31MAR-GRS *****	INT		404.95	4,717,478.47Cr
28/03/2017	SOUTHERN ELECTRI SAVE COSTS	EBP	56,274.80		4,717,073.52Cr
28/02/2017	28FEB-GRS *****	INT		1,564.02	4,773,348.32Cr
24/02/2017	SOUTHERN ELECTRI SAVE COSTS	EBP	65,992.75		4,771,784.30Cr
24/01/2017	SOUTHERN ELECTRI SAVE COSTS	EBP	81,772.15		4,837,777.05Cr
30/12/2016	30DEC-GRS *****	INT		3,286.72	4,919,549.20Cr
21/12/2016	SOUTHERN ELECTRI SAVE COSTS	EBP	212,293.08		4,916,262.48Cr
	<b>OPENING BALANCE</b>				<b>5,128,555.56Cr</b>
<b>Totals</b>			<b>605,585.36</b>	<b>6,035.05</b>	

NB: Transactions with today's or next business day's date may still be subject to confirmation and may subsequently be reversed from your account.

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