



## **SAVE (Solent Achieving Value from Efficiency)**

### **Project Progress Report**

Project Number	SSET206
DNO	Southern Electric Power Distribution Ltd
Reporting Period	December 2015 – June 2016

## 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 will involve a cross-section of domestic customers which are representative of much of the UK. Organisations partnering 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 will involve approximately 8,000 customers across 4 trial methods: using 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 initial stage of this reporting period saw the first live trial period of method 4; the Community Energy Coaching trial. This was focussed on the coaches' engagements with the trial communities of Shirley Warren and Kings Worthy. These engagements were used to identify local community groups and engagement vehicles which would facilitate the project's wider aspirations while building supportive relationships within those communities, as a foundation for future demand reduction activities.

Within the final weeks of the previous reporting period SEPD received notification from three project participants that the smart plugs, provided by project partner Maingate and installed to provide appliance specific usage data had failed during use; overheating and causing damage to the external casing, and in two cases the appliance plug. While investigation proved no fault within the smart plugs and data from previous installations supported a clean safety record, because of the potential severity of future failures SSEPD completed a full recall of these devices from project participants within the initial stage of this reporting period.

A core issue within the period was the ongoing liability dispute with equipment supplier Maingate Enterprise Solutions following the endemic failure of the household monitoring equipment supplied for the target 4,600 participants which would form the population for trial methods 1-3. In March Maingate Enterprise Solutions advised SSEPD that they had entered into voluntary administration, although it is essential to state that Maingate listed a number of factors in addition to the SAVE project as reasons for this decision.

SSEPD immediately commenced an ITT process with potential suppliers identified through the risk mitigation activities which had been undertaken throughout the liability dispute. In May, following a period of questions and securing approval from both the Project Partner Review Board (PPRB) and SSEPD Innovation Steering Board, the project appointed Navetas Energy Management Ltd as the new equipment supplier for the Project. The Navetas equipment offers great improvements in ease of installation, data capture, battery life and communications ability in comparison to the previously utilised equipment. The user interface and data transfer systems provide equivalent and in some cases enhanced capabilities over the previously utilised Mvio system, delivering a whole solution that meets or exceeds all project requirements and learning objectives for the lifespan of the project.

Following this appointment and utilising installation processes and formal change request documentation produced within the last reporting periods, the project has implemented a pilot process for this new equipment which commenced on the 1st June 2016. This pilot installation and full reinstallation plan, combined with impact analysis conducted by each project partner and supplier has informed the revision of Formal Change Request CR-2 which is planned for submission before the end of June 2016. This change request seeks approval for the delay of trial methods 1-3 and all associated deliverables by a 12-month period, effectively extending project completion from June 2018 to June 2019, noting the endemic failure of household monitoring equipment detailed in the previous report as the reason for the delay. Upon approval the plan will ensure the reinstallation of household monitoring equipment across the project population can be completed by the end of December 2016.

To maintain a clear focus on the successful management of the various packages of work, the Project has held six PPRB meetings, enabling all partners to meet at least once a month to discuss progress and plan activities. Representatives of BMG, the supplier responsible for recruitment and equipment installation in trial methods 1-3, have attended all PPRBs within the reporting period to obtain support in the construction of the pilot process and support the wider corrective actions work package.

## 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:

Risk Description	Further details and impact	Controls
<b>Recruitment</b>  Inability of recruiting the necessary number of customers for the trials across the Solent area.          Break up of Partnership.	May not reach the intended numbers deemed necessary. Would make it difficult to observe small changes in behaviour and have confidence that changes are result of interventions, not other factors.          Through dispute or disagreement partnership dissolves with one or more partners electing to leave the Project Board.	80% of total sample recruited and activities paused due to equipment issues and will resume now alternative equipment secured. Regular update meetings and reports on progress will be in place for this.          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 due to administration, however other partners remain committed.
<b>Procurement</b>  Provision of replacement equipment following failure in clip-ammeter and re-installation of new equipment across Project population. Management of costs associated with subsequent impacts to wider work packages.	The Project is unable to secure a suitable replacement of the failed equipment and re-installation of new equipment across Project population does not meet expected timescales. Management of costs associated with subsequent impacts to wider work packages.	SSEPD Legal and Procurement teams supporting appointment of new equipment supplier and pursuing losses from Maingate's administration. Full partner support in production of corrective actions with focus on participant protection for the re-installation process. Formal change request constructed detailing requirements, impacts and actions which will be rigorously managed to ensure successful outcome.
<b>Installation</b>  Monitoring equipment cannot be installed.          Failure of equipment and lack of data.          Equipment faulty and data not available.	May be unable to install equipment, or the equipment may fail to operate correctly and not transmit data back to secure server, impacting on ability to observe and analyse behaviour and impact of interventions.	Experience from the initial recruitment process will inform the reinstallation process and the newly sourced alternative equipment is far simpler to install than the original kit.          Initial household monitoring equipment has failed, alternative solutions have been reviewed and Navetas appointed to replace all faulty equipment. CR-2 being constructed to allow process of corrective actions and the restoration of the Projects ability to effectively run trials 1-3.
<b>Other</b>  None		

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

### **Key learning outcomes**

There have been no SDRCs completed within this reporting period, and due to the ongoing issues across methods 1-3 lessons learned have primarily been ad-hoc and process related. These are:

- Pilot reinstallation and corrective actions process, including participant engagement methods, equipment installation process and system development
- Self-installation of household monitoring equipment and the potential impacts/benefits of this approach to innovations projects
- Behavioural change factors within trial design and the transition of interactions designed for individual approach to community facing approaches
- Stakeholder engagement and community obstacles within the Community Energy Coaching live trial

### **Approach to learning capture**

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**

- On the 10<sup>th</sup> February SSEPD met with representatives from the University of Portsmouth and the Isle of Wight Local Authority, the SAVE project was summarised and discussed.
- The SAVE Project team held a meeting with ENW on the 10th March to review similarities between the Power Saver Challenge project and the community coaching trial.
- On the 24<sup>th</sup> March SSEPD presented a summary of the SAVE Project to a group of energy efficiency suppliers, academics and Local Authority representatives at Future Solent.
- On the 14<sup>th</sup> April the SAVE project was summarized at the annual Berkshire IET SSEPD engagement evening alongside detailed reviews of the wider innovation portfolio.

### **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.*

The initial stage of this reporting period saw the first live trial period of SAVE intervention method 4, the Community Energy Coaching trial in Kings Worthy and Shirley Warren. While this trial saw minimal demand reduction activity, the coaches involved carried out focussed engagements throughout the period in support of ongoing activities to combine project aims with local community aspirations and engagement vehicles such as community groups and neighbourhood watch schemes.

The Project also progressed the liability dispute with equipment supplier and project partner Maingate Enterprise Solutions, following the endemic failure of the household monitoring equipment supplied for the target 4,600 participants which would form the population for trial methods 1-3. This equipment failure and subsequent protracted discussion to identify and secure an alternative solution have significantly delayed trials 1-3 and delivery of the associated learning.

Despite protracted delays in live trials and household monitoring equipment failures, the project population has experienced lower than expected levels of attrition during this reporting period. Of the 4,007 participants recruited in August 2015 there are, at time of reporting, 3,983 active participants remaining. If the project can maintain this attrition rate then less than 150 participants will be lost throughout the 3 year period of live trials. Unfortunately at the time of reporting, collection of demand data from these participants has now ceased due to the equipment failure and subsequent partner issues detailed in this report.

### 2.1 Smart Plug Failures

Within the final weeks of the last reporting period SSEPD received notification from three project participants that the Maingate supplied smart plugs installed to provide appliance specific usage data had failed during use, overheating and causing damage to the external casing and in two cases the appliance plug. The project immediately ran a full investigation on the affected plugs and appliances, collecting the equipment from participants and compensating for the replacement of any affected appliances. An array of tests were run on the plugs at Maingate's facilities in Sweden to ensure all potential failures modes were identified and additional tests were run on 'healthy' plugs provided by the project to identify any potential batch issues.

All three incidents involved the use of a kettle with the smart plug, Maingate's investigations proved no defect within the smart plugs themselves and both Maingate and the manufacturer AEON confirmed the plugs ratings were more than sufficient to cope with the demand from kettles and larger appliances such as electric heaters, Maingate also confirmed there was no historic evidence of similar issues and a 100% safety record across previous installations. Despite these assurances, in light of the potential hazard that continued use of the Smart plugs presented, the project implemented a full and immediate recall of the 4,200 smart plugs from the project population. On the 17<sup>th</sup> December the 1,853 participants who had smart plugs installed were sent a letter detailing the need to recall the smart plugs, requesting participants to remove these plugs from use and store them securely until the project arranged their return. This letter was followed by proactive email and telephone contact, undertaken by project supplier BMG, to ensure 100% response was secured across the affected properties before the 24<sup>th</sup> December.

A review of the actions undertaken on the 4<sup>th</sup> January confirmed that 95% of the affected sample had removed/were able to remove the plugs themselves. SSEPD undertook 12 visits to participants between the 21<sup>st</sup> December and the 11<sup>th</sup> January to assist participants in removing the plugs and a further 33 phone calls or emails were made to support participants in the self-removal of the devices. During this process a further two instances of plugs overheating were identified although these instances were less severe and had not resulted in external damage, only requiring SEPD staff to remove the plugs from site. 78 properties (4% of the sample) did not respond to letter, email or phone calls despite a total of 13 attempts across all mediums for each property, however these properties have been visited throughout the reporting period to remove the smart plugs from use. Maingate supported the recall process, offering both investigative and remote customer support functionality throughout December and January.

Figure 1, Copy of the Smart Plug recall letter

<Address 1>  
<Address 2>  
<Address 3>  
<Town>  
<County>  
<Postcode>

Study ID: <956XXXXXX>

Thursday 16<sup>th</sup> November 2015

Dear householder,

**SAVE ENERGY USE RESEARCH STUDY – IMPORTANT NOTICE**

This letter contains important safety information and requires your immediate attention concerning the smart plugs we have provided you as part of the SAVE Energy study.

- Please stop using these smart plugs. As a precautionary measure we would like you to unplug them from any electrical appliance, and store them in a safe place.
- Our investigations have shown that in a very small number of cases the plugs may be incompatible with some electrical appliances. Although the plugs are not defective, some specific electrical appliances may cause the plugs to overheat if connected.

We will contact you in the New Year and arrange the return of the smart plugs back to the Project. Details of the plugs can be found overleaf for guidance.

Please be assured that all other equipment provided by us is operating normally and as expected.

We at the SAVE project would like to thank you for your ongoing participation in the study into household energy use. The information we gather helps us shape the future of energy use in the UK.

Thank you for being part of this exciting project. If you need assistance with this process or have questions about the equipment please contact the SAVE technical support line on freephone 0345 0721 932. Opening hours for the team over the festive season are working days only (not bank holidays) between 09:00-17:00, alternatively you can send an email to [save@sse.com](mailto:save@sse.com).

Yours,

A Howison

SAVE Project Manager

This study is being conducted in accordance with the Data Protection Act. This means your personal details will be kept strictly confidential and you and your household will not be identifiable from the data.

إذا كنت بحاجة إلى نسخة من هذا الاستبيان بهذه اللغة، برجاء الاتصال برقم فري فون الوارد في نهاية هذه الصفحة

**Arabic:**

**Bengali:**   
 যদি আপনি এই পাঠ্য পত্রটি পড়তে পারেন তবে আপনি এই স্মার্ট প্লাগগুলি সরিয়ে ফেলুন এবং সেগুলি নিরাপদে রাখুন।

**Chinese (traditional):** 如果你需要这份调查问卷的中文译版，请打本页下方的免费号码。

**Chinese (simplified):** 如果你需要这份调查问卷的中文译版，请打本页下方的免费号码。

**French:** Si vous souhaitez recevoir une copie de ce questionnaire en français, veuillez contacter le numéro vers situé au bas de cette page.

**German:** Wenn Sie möchten, erhalten Sie eine Kopie des Fragebogens in Deutsch, bitte rufen Sie die Nummer unten auf der Seite.

**Italian:** Se lei ha bisogno di una copia del questionario in questa lingua, per favore chiami il numero al fondo della pagina.

**Nepalese:**   
 हरेक जो यो पत्र ले पढेछे अ वाको ओह ट कुनै हिस्साकोसँगै इन सेवारी प्येअसे चर ट नुम्बरे अर ट कोल्डोम ओह पत्र पढे।

**Polish:** Jeżeli potrzebuje Pan/Pani egzemplarz niniejszego kwestionariusza w języku polskim, prosimy zadzwonić pod bezpłatny numer telefonu podany na dole tej strony.

**Portuguese:** Se voce quiser uma cópia deste questionário nesta língua, chame por favor o número do freephone no fundo desta página.

**Punjabi:**   
 ਜੇ ਤੁਹਾਨੂੰ ਇਸ ਫਾਰਮ ਵਿਚ ਇਸ ਭਾਸ਼ਾ ਵਿਚ ਪ੍ਰਤੀਕ੍ਰਿਤ ਕਰਨ ਦੀ ਜ਼ਰੂਰਤ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਇਸ ਨੰਬਰ 'ਤੇ ਆਪਣੇ ਫੋਨ 'ਤੇ ਆਪਣੇ ਫਰੀ ਫੋਨ ਨੰਬਰ 'ਤੇ ਆਪਣੇ ਫੋਨ ਕਰੋ।

**Russian:**   
 Если Вы требуете этого письма на этом языке, пожалуйста назовите бесплатный телефонный номер ниже.

**Spanish:** Si usted desea una copia de este cuestionario en este idioma, por favor llame al número al final de esta página.

**Tamil:**   
 இந்தக் கருவியை இந்த மொழியில் கிடைக்க விரும்பினால், கீழ்க்கண்ட இலக்கு எண்ணில் தொடர்பு கொள்ளவும்.

**Filipino:** Kung gusto ninyo ng isang salin ng tagalog sa listahan ng mga tanong, tawagan 2oa ng numero sa ibaba ng papel.

**Urdu:**   
 ہوت وہ راکورد لڈن کڈیا یک سہاں لائوس سہ رڈم ڈائیز سہ وک پیا رڈگا۔   
 ڈوف رپ ریسپنڈ ڈوف ڈوف سٹنگ سٹوڈ رڈم رڈگا سٹک سٹجس سہ برک مارپ۔   
 ڈیڈرگ

**SAVE technical support - 0345 0721 932**

This study is being conducted in accordance with the Data Protection Act. This means your personal details will be kept strictly confidential and you and your household will not be identifiable from the data.



The project received praise internally on the management of this additional equipment issue which has been used as an example of best practise in relation to customer safety. The project is confident in the actions undertaken and that the full recall was required although the failures occurred on less than 0.1% of the smart plugs installed throughout the project. Equally important is the participant reaction to the recall, all media was constructed to be informative without creating panic and offering reassurance on the support available from the project in the removal of devices; as a result 97% of the affected population were happy to remain active participants in the wider project without needing further reassurance.

The equipment supplier Maingate refused to offer any alternative device or financial compensation to the project due to the safety record of the devices in previous installations, lack of fault within the units tested and levels of failure being within acceptable limits, leaving the project with no means to replace the devices or expected data they would provide. Through a detailed review of the impacts the PRB have confirmed that the removal of the smart plugs has minimal impact to project learning, analysis of appliance level demand data will support the construction of the customer model but is not intrinsic to the process. To mitigate this issue and ensure all data required is available the project is confident that through a combination of Time of Use (ToU) surveys and granular household consumption data the insights into specific appliance use can be obtained without replacing the Smart Plug devices.

## **2.2 Maingate Liability Dispute**

In January the Project met with Ofgem to provide information on Maingate's proposed solution to the wider equipment failures, the potential impacts this solution would have on the wider project and the smart plug issues. This proposed solution was based around retention of the Maingate supplied gateway and all previously secured services, replacing the clamp element of the household monitoring solution only. Maingate had at that time obtained informal agreement to secure replacement clamps provided by Navetas Ltd, a UK based company which produce the 'Loop Energy Saver' device which fielded impressive battery life once installed of 7-10 years thanks to its energy 'harvesting' functionality. In addition to the required functionality to meet project requirements, such as minimum 15 minute interval data provision and ability to store readings for a period if communications were lost, the battery life of any replacement was a key risk following the nature of the previous equipment failures experienced.

This initial arrangement was based on Maingate securing only the clamp element of the Loop Energy Saver solution, discarding the data services and gateway elements of the solution as Maingate already had these elements within their originally supplied package. The new clamps would need significant development to link to the currently installed, Maingate supplied gateways. However, Maingate offered assurances that this development could be completed within 2 months of securing contractual agreements and had commenced this development in expectation of securing full approval from the project. The clamps could then be seamlessly installed and pair to the existing gateways, offering household demand data at equal frequency and to the same quality as the failed device specifications.

At this stage investigations carried out by SSEPD, project partners and BMG had delivered an estimated cost for a full reinstallation and a 12-month delay of £530,000, not inclusive of replacement equipment or pilot costs. Frequent meetings were held between SSEPD and Maingate, supported by the legal teams from both parties, however Maingate continued to dispute liability for any costs outside the replacement of equipment. As part of this dispute Maingate proposed that participant self-installation of the replacement equipment would greatly reduce the total costs faced by the project.

This proposal was discussed heavily in the December, January and February PPRB meetings with SSEPD, BMG and UoS voicing concerns around participant reaction to the request to install equipment and the potential attrition to the project population. In light of the considerable cost of a repeat 'project led' reinstallation and the ongoing concern that these costs would not be covered by Maingate, the project undertook a review of the proposal. Partners and SSEPD applied several adjustments, including development of an 'opt-in' by participants to receive a visit by the project to install on their behalf, supporting any participant who would be unable to self-install such as the elderly or infirm. This restricted approach to self-installation, supported by advance notification to participants allowing advance response on their preference was accepted by all partners acknowledging that a percentage of equipment 'self installation' was in the best interests of the project.

SSEPD continued throughout January and early February to discuss financial liability with Maingate, assisted by the SSEPD Procurement and Legal teams in the hope of achieving an outcome which covered the majority, if not all of the total costs the corrective actions would incur.

In early February Navetas withdrew their offer of supplying Maingate with the clamp element required within the proposed solution, potentially due to the delay in securing a full contractual agreement due to the ongoing dispute over additional costs. Maingate were granted a short period in which to identify another solution within the cost barriers already identified, SSEPD also presented Maingate with an option to settle at 65% of the total costs allowing them to leave the project and avoid further legal action. Simultaneously SEPD carried out an RFI exercise inviting suppliers to respond to the full equipment and data service specifications which would meet the full project requirements in case of Maingate's failure to identify an alternative solution. Unfortunately Maingate could not find an alternative and requested more time to conduct a fuller investigation. On the 18<sup>th</sup> February, in light of the already protracted delays to core project activities, increasing costs associated to the delays and Maingate's stance on their liability, SSEPD advised Maingate of our intention, should an acceptable offer covering the majority of the associated costs not be made, to give notice of contract termination.

Subsequently on the 3<sup>rd</sup> March 2016 Maingate advised SSEPD that they had filed for insolvency and would no longer be part of the project. It is essential to state that Maingate included reference within that notification that there were an unspecified number of reasons for their decision to liquidate and that the SAVE project was not the only contributing factor. The SSEPD legal team are continuing communications with the insolvency practitioners in the hope of securing compensation against the losses the project has sustained, however, there are no confirmed timescales or estimated potential

compensation amount available to the project at time of reporting. Shortly after the 7th March all communications with Maingate ceased, including access to the data files being updated with any remaining communicative equipment and updates on the ongoing investigations into specific equipment failures.

SSEPD immediately undertook three separate work packages in response to this notification, the first was to progress the RFI exercise and on the 15<sup>th</sup> March, supported by four meetings to outline specifications and project requirements, two companies were selected to progress in to an ITT. A core requirement of this process was the need for an accelerated start-up post contract award to ensure the project could adhere to the planned timescales remaining within the proposed 12 month delay. The equipment specifications within the Full Submission and learning generated throughout the equipment failures, investigations and recruitment phases formed the core detail of the ITT.

The second was to plan a pilot installation of the new equipment to be implemented as soon as the new equipment supplier had been successfully awarded a contract. The need for urgency in this process was driven by the ongoing delay to the project, combined with the need to provide informed costs of reinstallation of the household monitoring equipment. At this time the project could only estimate how many participants would be able and/or willing to self-install the new equipment. This estimation gave a considerable range of costs, if 10% of the sample required physical project assistance then costs would be £88,000; should 100% require assistance then these increased to £330,000, hence the need to define these costs was an essential aim of the pilot installation process.

Lastly the project began a review and re-construction of the as yet un-submitted Formal Change Request detailing the 12-month delay to the project and change of equipment, discussed with Ofgem initially in September 2015 and throughout the reporting period. This document, originally produced for submission in December 2015 but delayed by the contractual dispute with Maingate, explains that the experienced equipment failure has delayed project progress within trials 1-3 by a period of 12 months to allow re-installation of new equipment across the project population of 3,983 participants, and, installation across the 593 outstanding participants yet to be recruited.

Ofgem have confirmed their appreciation of the exceptional circumstances the project has encountered and that the project has remained proactive in its efforts to report on and mitigate against the impacts of the equipment failure and subsequent events. The delayed submission of this change request has been accepted with preference that every effort is made to avoid additional budget requirements, as such a core task of the reconstruction has been the identification of efficiencies the project can apply to avoid any increase in budget provision.

## **2.3 Replacement Equipment Process**

The ITT process commenced on the 15<sup>th</sup> March and SSEPD subsequently received two compliant responses for consideration. It was the aim of the project to complete the process and award a successful tender on or before the 15<sup>th</sup> April, allowing suitable time to complete the pilot and

subsequent analysis. Unfortunately delays in ensuring the tender was fully reflective of the whole equipment and data solution now required, providing clarification on technical specifications and securing the necessary approvals resulted in a delay of 1 month. Following these clarifications and two rounds of formal questions the successful tender was awarded on the 19<sup>th</sup> May to Navetas Energy Management Ltd.

Their Loop Energy Saver device and supporting data services met all requirements stipulated by the project to replace Maingate as the project's household monitoring equipment supplier. It is essential to note that the tender process was regulated and EU compliant, importantly SSEPD is confident no advantage was obtained by Navetas through their earlier contact with Maingate.

The Navetas solution offers great improvements against the originally supplied equipment, primarily the extended expected battery life of 7-10 years, available thanks to the energy 'harvesting' functionality of the clamp units. In addition, the Navetas solution allows for the development of 10 second data collection, offering improved granularity of data in turn allowing for more accurate monitoring and analysis of any demand shift/reduction stimulated by the project trials. The ability to collect 10 second data would also allow for appliance specific demand modelling when analysed in combination with survey responses on appliance use, effectively replacing the functionality lost with the smart-plug failures explained earlier in this report.

In the case of communications loss through broadband or mobile signal outage, the clamp element of the solution can store 30 days of data internally, once connection has been re-established with the central servers this data is then relayed with actual time-stamps included, essentially protecting the data from all but a complete equipment failure. The system also searches for the earliest record missing, only allowing the clamps to send all data in an 'earliest first' process which minimises the potential need to aggregate across periods of data loss.

The Loop Energy Saver user interface already fielded by Navetas offers functionality equal to the Mvio system developed by Maingate, minimising required re-development to 'white labelling' and project branding. Navetas confirmed the ability to ring fence the project population within this system, allowing for each trial group to receive the specific messaging required within DNV GL's trial designs and much easier analysis and comparison across the trial and control groups. Navetas also confirmed that all references to tariff calculators and supplier pricing would be removed to ensure the project remained compliant to business separation and regulatory requirements.

Following successful tender award, existing project partners/suppliers have worked closely with Navetas to ensure all project requirements are identified and applied to the ongoing development of the Navetas solution. UoS have ensured all data collection, transfer and storage elements offered by Navetas are integrated into their analytic systems, also that the qualitative and quantitative checking processes developed in the previous phases of the project are adopted, ensuring any potential equipment or communications problems can be quickly identified. Navetas have also confirmed the ability to remotely monitor the clamp battery status and signal strength of the clamp/gateway

communications, further improving the projects ability to quickly identify and rectify any emerging equipment issues.

Additionally the Navetas system and allocation of equipment IDs has allowed the grouping of trial and control groups to be written in to the system, providing greater accessibility of the 'group' response to interventions, as well as comparison of results against each group and the control group, all increasing analytical efficiency in the latter stages of the project. This functionality will also improve the ad hoc monitoring of trial impacts, both for DNV GL and SSEPD, supporting the demand reduction messaging throughout live trials and the ability of the project to refine methods 1-3 on an ongoing basis.

DNV GL have provided Navetas with the user interface design portfolio developed in partnership with Behaviour Change to allow the white labelling of the user interface and detail the project's proposed engagement methods. These methods, outlined in the previous report, include trial group specific messages and events, indications of the need to avoid sustained usage in 'peak' periods for the network and information on the wider energy network issues. This work package, while less urgent than the pilot process and data provision requirements, has been a great success thus far, benefitting from the approach of Navetas to adapt the user interface, their already impressive functionality and the development undertaken by DNV GL earlier in the project. As expected from the previous solution, the interface will allow participants to monitor day and week usage data with previous periods also displayed for comparison, encouraging participants to compare profiles and investigate anomalies.

BMG have worked closely with Navetas to familiarise themselves with the equipment to be installed and produce the participant facing media required to support any installations. The simplicity of the equipment installation which is supported by an instructive online registration process and a 'YouTube' video has reassured the project that a large percentage of the population should be able to self-install the devices. Development of an FAQ document, project branded packaging and confirmation that UK based support services will be available throughout the installation phases and tailored to participants needs have resulted in a high confidence for a successful pilot and installation of these new devices.

Informed by the previously experienced issues, the commercial documentation has been developed to offer assurance on guarantees and warranties for the equipment, specific requirements on support for both the project team and participants, to ensure any issue is quickly routed through to expert advice and resolved immediately. SEPD has ensured throughout that all systems, equipment and information offered to participants is compliant with the project's Customer Engagement Plan (CEP) and that all data collection, transfer and storage elements supplied by Navetas meet the requirements in the project's Data Protection Strategy (DPS). As part of the wider activity ongoing in the latter half of this reporting period, the project's Management and Delivery documentation is also being updated to reflect the considerable changes the project has experienced.

## **2.4 Pilot Process and Full Installation Preparation**

Using templates produced in the original pilot process (Feb-April 2015) and informed by further adjustments made earlier in this reporting phase, the project has produced a complete pilot installation plan and adapted this to the new equipment supplied by Navetas. BMG have led this package of work with support from SSEPD, UoS and DNV GL to produce an effective, successful pilot which can provide essential learning for the full re-installation to follow in the next reporting period and data to support the formal change request required to return the project to normal operation.

An essential element of the pilot has been the delivery of a statistically important sample, allowing upscaling of the results to the full population to inform potential cost implications for the complete reinstallation. It was decided that the pilot sample would consist of 400 project participants, representative of the demographic and geographical area covered by the project population of 3,987. The recruitment pilot in 2015 was targeted against 100 participants, however the ease of installing the new equipment combined with the perceived security of the current project population and the learning already collected by the project team has given confidence in success despite the increased size.

Positive engagement of participants was also seen as an essential objective especially when considering the change of installation processes from the original project-led installation to the self-installation process now preferred. The project has constructed a letter to provide this initial engagement, explaining that the new equipment offers distinct improvements against the older installed equipment, is simple to install and would be delivered to participants in the week following the letter. The letter also explains that should the participant need assistance in installing, or has any concern over this or any other element of the project, that support teams are available online and through Freephone numbers.

The project has identified a number of households who may not be able to complete self-installations, for example the elderly or disabled, thanks to analysis of the initial survey data collected during the recruitment phase. For the purposes of the pilot no alternative media has been created but the construction of the initial letter, and following installation instructions to be delivered with the equipment have been sensitively constructed to ensure there are clear options for individual participants to contact and arrange for project teams to attend and install the equipment on their behalf.

The project has allowed a period of seven days following the letter mailing before sending the equipment, this is to allow any participant to contact BMG directly should they need assistance or to advise they will need a project-led installation. Should no contact be made within that period, Navetas will then send the equipment to the pilot sample complete with installation instructions and web address for the online registration pages which direct the installation in a live process. Once the mailing has been completed a further seven day period will follow before BMG field teams commence pro-active phone calls to either encourage self-installation or to arrange appointments to complete a project-led installation.

Included in the equipment mailing will be a pre-paid envelope, large enough to hold the original Maingate monitoring equipment and, should the participant wish to leave the project at this stage, the Navetas equipment. Additionally there will be simple to follow removal instructions for the Maingate equipment which detail the need to ensure all project equipment is returned for environmentally friendly disposal or recycling given the electronic nature of the equipment and the battery elements within. The project team hope this will also reduce the possibility for any new equipment to be lost during this phase of the pilot process.

The project has considered the potential negative reaction from participants should they need to collect the new equipment in the event no-one is home during initial delivery, and that participants will have to visit a post office to return equipment given the size of the package. The repeat reassurance of project assistance being available across all media used, combined with the commitment shown by the majority of participants during the Smart Plug incident, and, the feeling that receiving packages is in it's own right an 'exciting' experience are the factors which have given us confidence any attrition should be minimised. If the pilot displays attrition rates which are unsustainable the project will re-structure the approach for full roll-out and reconsider the potential to visit all properties to install new equipment and remove the redundant equipment.

The second seven day period will also allow Navetas to monitor the ring-fenced project platform for any installations which have been made. Daily reports will be produced and sent to BMG, allowing for any participants who have completed self-installations to be removed from their pro-active call list, and SSEPD to monitor the progress in this essential stage of the pilot. For clarity and to ensure participants can receive effective information the Navetas and BMG support lines are separately displayed, offering equipment and installation advice from Navetas within the equipment mailing, and project advice or general questions on the initial letter. Both organisations have also committed to sharing FAQ information and direct communications points internally so that participants contacting the wrong organisation still receive the help they need quickly and without inconvenience.

Following the final seven day contact period BMG field teams will then pro-actively contact any participants who have not:

- contacted the project to request support or a project led installation; nor
- installed the equipment based on Navetas reporting

The field teams utilised by BMG for this pilot were all integral to the successful delivery of the original recruitment and installation phase of the project. Using their experience of the project, the equipment and their background expertise in field marketing, the project expects this phase to encourage the highest percentage of self-installation. Should a participant show any sign of concern over the self-installation or advise the BMG field teams that they will be unable to complete the installation, the field team will then arrange for an appointment, at the participant's convenience, to attend and complete a project-led installation.

This project has allowed this final stage a target completion time period of 14 days, however the project team accept that a small percentage of pilot installations may continue beyond this time based on appointments. Analysis of the participant response to the media and contact methods will commence immediately with improvements being applied in preparation for the full re-installation phase. Analysis of the willingness and ability of participants to complete self-installation will commence after equipment has been delivered and throughout the following phases. Ongoing analysis of the data provided by the monitors will commence with the first installation; the UoS team have worked closely with Navetas to produce a daily reporting and weekly data transfer frequency to meet analytical requirements. This triple approach to analysis will guarantee that the integrity of the pilot and all learning generated is robust, and that any equipment or communication problems are identified and corrected immediately.

The overall success of the pilot will be measured by the percentage of successful installations overall, however the percentage of participants installing the devices will provide an informed estimate as to the overall costs of the following re-installation phase, essential for inclusion in the formal change request. Ultimately the pilot process has been planned to encourage as close to maximum as possible self-installation by the sample 400 participants, reducing the cost impact of repeating a fully project-led installation and allowing for the completion of all corrective actions by December 2016.

Pending approval of the change request which details the 12-month extension and equipment changes within the project, the full re-installation plan has been mapped out and work completed on the subsequent phases. While learning from the pilot is expected to inform specific detail, such as any amendments to the media format or approach to the response periods, the project has confidence that the plan is robust and provides the best route to complete the necessary works. This plan details the required dates for work package completion inclusive of the pilot re-installation, data analysis and improvement process following learning capture, full reinstallation, recruitment completion and base data capture.

Navetas equipment will be ordered in batches, once confirmed BMG letter mailings will follow to groups of project participants. This approach allows Navetas the time to conclude any configuration required prior to mailing equipment to those groups, participants to respond to the initial letter with any installation preferences and for BMG field teams to follow up, group by group, with pro-active contact and where required project-led installation. This batch mailing process is planned to continue until November 2016 with all equipment mailed by mid November and field teams concluding on-site activity before mid December.

UoS are confident that the growing sample will provide, with the inclusion of the household demand data already collected by the project in previous phases, a suitable 'base' data period for comparison during the live trial periods to follow in January 2017. In addition, the control group of 1,200 properties will provide a direct comparison inclusive of any background changes in consumption which the population may undergo, such as the expected increase of PV installations and potential effect that EV vehicles may have against a small percentage of the whole sample.



BMG will also resume recruitment of the remaining 593 participants required by the project to meet the target of 4,600 properties. This phase was paused in August 2015 following the equipment failures but thanks to the appointment of Navetas and the confidence of the BMG field teams to conclude both the re-installation phase and the recruitment phase concurrently the project expects, with allowance for normal ongoing attrition, to reach 4,500+ participants before the end of December 2016.

## **2.5 Formal Change Request CR-2**

Development of the Formal Change Request, while reliant on the successful completion of the tender process and ensuing equipment delivery, has been a core activity of the reporting period. The exit of Maingate has driven a full, detailed review of the Full Submission, Project Direction and Maingate's Work Order to identify all responsibilities and activities which need to be reassigned during the tender process and construction of the formal change request.

The initial part of the change request detailed the need to delay trials 1-3 and all associated deliverables, extending the project by a period of 12 months to allow for reinstallation of new equipment across the project population. While the liability dispute with Maingate delayed the corrective actions significantly, the project is confident that these actions can still be completed within the originally discussed 12-month period, thus the initial part of the change request has not required significant adjustment. All project partners and suppliers had completed impact reviews of the delay in late 2015, these have now been updated to include the additional efforts expected to support Navetas in assuming all the responsibilities required to meet project expectations. These adjustments, detailing resource and cost impacts will be included in the formal change request when it is submitted shortly after this report.

Originally the second part of the formal change request detailed the change of clamp element within the household monitoring solution which had been proposed by Maingate and supported by the project. This section and the associated review of documentation have required detailed change following Maingate's withdrawal from the project and subsequent appointment of Navetas. All aspects inclusive of work packages, equipment specification and appendices have been reviewed and SSEPD are confident that the change request is wholly inclusive and transparent of all impacts resultant from the equipment failure, delay and loss of partnership which the project has worked to rectify.

## **2.6 Trial Intervention 4 – Community Energy Coaching**

On the 4<sup>th</sup> January, Neighbourhood Economics (NEL), leading the Community Energy Coaches from Winchester Action against Climate Change (WINACC) in Kings Worthy and the Environment Centre (tEC) in Shirley Warren undertook the first live trial of SAVE Method 4, the Community Energy Coaching (CEC) trial. This initial trial period's core activities have been focused on the identification

and implementation of engagement opportunities, and the combination of demand reduction and energy efficiency messages with 'local' drivers to construct a 'localised' strategy for each area.

This trial period was the first opportunity for the coaches and host organisations to engage directly with community-based organisations and local leaders to establish local priorities, providing the 'bottom-up' engagement to support the 'top-down' activities which formed the preparation stages in the last reporting period. To support the formation of a sustainable, accessible approach in both communities the project is developing bespoke websites in partnership with the host organisations. These websites will be used to advertise events, engagements and localised demand data provided by the substation monitoring alongside holistic messaging combining the local drivers and energy efficiency messages.

The priority in going 'live' within the trial communities was to establish each local community's distinctive aspirations for change and to begin to establish consensus among local organisations and leaders regarding the distinctive dedicated strategy (DDS) that the coaches / host organisation might then help to facilitate over the balance of the coaching project. In the process, the aim of direct engagement was to build local trust relationships which would:

- generally, build mutual support and sympathy for efforts to increase energy efficiency and reduce demand; and
- specifically, establish a local support group made up of representative and influential residents committed to working together to design and deliver positive outcomes on all fronts.

Building on the demographical analysis undertaken in the previous period combined with the insights gained from the stakeholder and steering groups, workshops and meetings have been held in both trial areas to identify community groups and interaction points for delivery of the project's objectives. These engagements, supported by representatives from the stakeholder groups as well as local community members, were also concerned with finding specific local drivers which the energy efficiency and demand reduction aims of the project could be combined with to ensure any activities were embedded, locally supported and encouraged by community ownership. These engagements have identified that there are far fewer opportunities with embedded community groups in the urban, more disadvantaged area of Shirley Warren when compared to the rural, more affluent area of Kings Worthy.

The Kings Worthy community reflects sophisticated levels of social organisation and resident participation, their historic approach to carbon reduction and energy efficiency schemes have made engagement and local support much simpler. In the three month live trial period, the Coach engaged directly with over 100 individuals in various formal and informal settings ranging from Parish Council and WI meetings to presentations to local school groups and youth organisations to interviews with elected members and activists.

The key outputs from Kings Worthy during the live trial are:

- the identification of a range of single issue and multi-issue (themed) approaches for DDS purposes as based on the thoughts and ideas collated through direct engagement

- a series of 4 workshops designed to reflect back the issues as identified and move to consensus regarding the preferred strategy for the community
- formation of a 'Coordinating Group' of 20 residents and its formal validation of 'Connecting Kings Worthy' as the overarching DDS theme

Figure 2, Examples of Multi-issue and Single-issue Approaches identified in Kings Worthy

<b>Multi issue approach</b> A community project which has multiple outcomes, offering broad appeal and quick wins as well as longer term goals. The objective is for SAVE coach to facilitate the project while recruiting and supporting other groups to deliver other outcomes.			
Name	Description	Pros	Cons
"Sustainable Kings Worthy" Community hub	Develop an overarching project that joins up of all the things happening in the area. It would create a signpost for people wanting to get involved and ways for projects to be publicised, effectively promoting what is already happening.	SAVE can run an energy reduction and efficiency project within the structure (including school energy efficiency and community building energy efficiency)	Will need to make sure that KW groups and organisations including the Parish Council are happy with format  Will require a strong message so it is clear what purpose the hub serves.
"Safer Kings Worthy"	Create a network of neighbourhood watches (or equivalent) in KW with a view to people looking after each other and socialising in their communities. Will help to <ul style="list-style-type: none"> <li>• Help people looking after each other and socialise within their neighbourhoods.</li> </ul>	Preparation for flooding has been raised as an issue by organisations	Neighbourhood watch has not been successful in the area and may have negative overtones Flooding has not been an issue for two years and may not be an issue high in people's minds
"Healthy Kings Worthy"	Promoting active lifestyles – walking, biking, football etc. <ul style="list-style-type: none"> <li>• Putting walking signs throughout the village</li> <li>• Support the establishment and maintenance of paths within the village</li> </ul>	Fits in with WCC walking strategy Local cycle company working in the area Fits in with school transport plan	Not as distinctive or novel message or issue – people may not see this as anything new as active lifestyles have been promoted by other agencies over the years.
<b>Single issue approach</b> A single community project that addresses one particular issue in the village. The SAVE coach would set up a steering group and facilitate the project development. Quick wins and engagement would come from the project development (through fund raising or working on a smaller part of the project)			
Name	Description	Pros	Cons
Putting solar panels on community buildings	Working on each of the 4 community building in the area to be energy efficient and have solar panels on	Can be used as an exemplar for community	High cost (due to reduction in subsidies)
Promoting walking and in and around village	Create a network of paths and routes for people to use around the village Could involve weekend walks for different groups and ages	Fits in WCC walking strategy so will get support this year (2016-17)	May not stand out to the community or captures people's imagination.
Creating cycle way to link the 2 parts of the village	Development of Kim Bishop walk to link the Top Field area with the rest of the village. At the moment it is a muddy overgrown track. By formalising the cycle path, resident from the top part of the village could access the other part of the village without crossing Springvale road.	Whether the village green status is awarded or the housing approved, people will be able to access this area easily.	Expensive Ownership is complicated

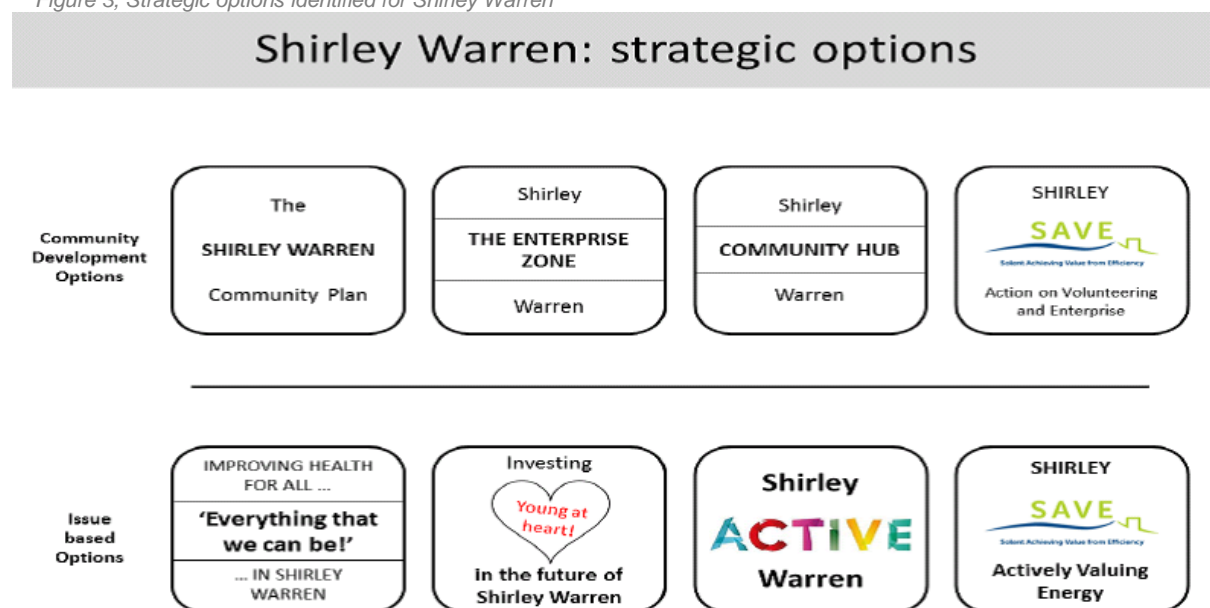
The Shirley Warren community suffers from extremely low levels of social organisation within the area, offering a greater challenge to engagement and the identification of community champions to support the project's objectives. The Coach has engaged with a wide range of individuals concerned or connected with Shirley Warren and has been able to build a picture of local conditions and potential priorities for change within the community. There have however been persistent difficulties in engaging directly with local residents owing to the almost complete absence of effective local participation structures and community-based organisations.

The implication within Shirley Warren is that the Community Energy Coach's core efforts have been to build trust within the community to allow identification of engagement opportunities before the 'bottom-up' approach can be formulated. The requirement for more creative thinking has driven more informal engagements, for example through street-based outreach and signposted drop-in events. Through this process NEL and the coaches have been able to build up a more conjectural picture of local residents' views and to identify some key individuals, engaged with informally, to assess their potential commitment to becoming community champions.

The key outputs from Shirley Warren during the live trial are:

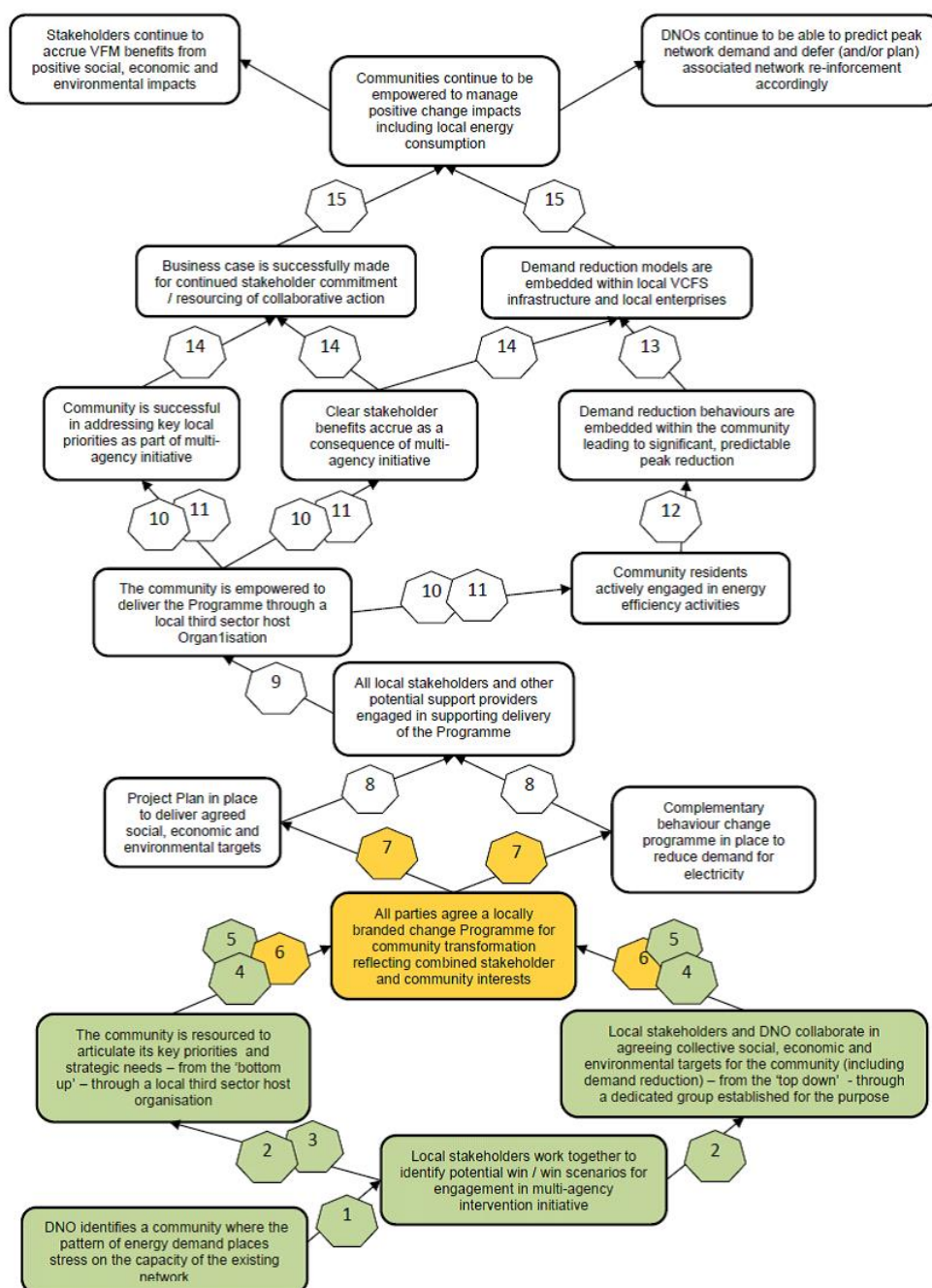
- identification of potential 'headline strategy' options
- an introductory trust building session with recognized community members at the local pub
- schoolyard promotion/awareness raising activities with the cooperation of the local head teacher
- an informal drop-in session for residents at a local church hall
- a commitment from 10 individual residents to continue to meet to help co-design and deliver the project

Figure 3, Strategic options identified for Shirley Warren



The activities and outcomes of the first live trial period can be matched to the strategic interventions/outcomes chain produced by NEL as part of the Community Energy Coaching project manual during the set-up phases of the project. This provided an accessible stage-gated visual to map progress and key delivery points specific to the CEC trial, also enabling future activities to be planned based on the intervention plans and expectations of the project.

Figure 4. Coaching Trial Outcomes Chain/Strategic Interventions (Project Manual, Neighbourhood Economics Ltd)



Building on the learning generated through the reporting period and in preparation for the next live trial, the project aims to have completed the DDS and have the local Coordinating Group and local websites in place and active for each trial community. A key deliverable for the next reporting period will be the outline programme of interventions for the remainder of the project, built around core test scenarios constructed by NEL and informed by the trial design works completed by DNV GL. The local stakeholders, host organizations and the coaches themselves will have primary responsibility for the final planning of this work package, ensuring that local aspirational elements are combined with project objectives to create an effective and sustainable trial design.

Additionally the project will have in place;

- the specific interventions for the next live trial (October '16-Mar '17), drawing from the overall plan of interventions and referencing the 10 core tests identified by NEL as the interactions most likely to elicit demand reduction/shifting responses from communities. These tests have also been informed through the projects review of similar community engagement projects, such as ENW's 'Power Saver Challenge' and WPD's 'Less is more' and 'SolaBristol' LCNF projects.
- requisite feeder monitoring requirements specified in detail, allowing for more granular monitoring of community response to project interventions in live trial periods 2 and 3. Additional feeder monitors were secured by the project within the initial Selex Gridkey Substation monitoring solution however installation of these devices was postponed while analysis identified the likely population centers which would provide the most effective demand response data.

Figure 5. 10 core test designs for the Community Energy Coaching Trials (NEL Progress report May'16)

INTERVENTIONS: 10 core tests	2016		2017			
	J/A/S	O/N/D	J/F/M	A/M/J	J/A/S	O/N/D
• CALIBRATED RESPONSE	●					●
• REPEAT ASK		●	●	●	●	●
• ENERGY LITERACY TESTING	●					●
• COMPETITIONS		●	●			●
• ALL COMMUNITY CHALLENGE			X ●		●	X ●
• DIGITAL NETWORKING			●			●
• SCHOOLS INITIATIVE						
• SUSTAINABILITY AWARDS		●				●
• MODELS OF EXCELLENCE		●				●
• ALWAYS ON ... DDS						
<b>Trials 1-3 Active</b>			X			X

Alongside direct local engagement activities, other planned activities in the background include:

- further analysis of baseline consumption data for 2015 to support intervention design
- ongoing creative platform development and design of communications material, extracting detail and suggestions from local communities and host organisations.
- development of sustainable communities benchmarking criteria linked to complementary stakeholder targets



- specification and monitoring of qualitative behavioral change impacts alongside measured demand reduction.

## 2.7 Model & Trial Design Process

While there has been reduced activity on trial designs a key element of activity has been the assessment of efficiencies which could be applied to reduce overall project costs in response to the corrective actions detailed in this report. Within the full submission an alternative analytical method was detailed by UoS in case of the projects inability to recruit the full sample of 4,600 participants. This 'factorial' approach was reliant on a minimum of 2,750 participants and utilised a multiple intervention approach for individual participants. This method, while providing potential efficiencies through the recruitment and installation phases and also reducing the amount of equipment required by the project, increases the complexity of trial management and results analysis.

In addition to the increased cost of trial management and analysis there is also a risk, should this approach be undertaken as part of the corrective actions process, that the reduced population combined with ongoing attrition during live trials result in the project being unable to offer statistically significant learning during latter delivery phases. At time of reporting the project review board have accepted the recommendation from UoS that this approach only be utilised should either the reinstallation phase or subsequent attrition of the project sample mean that the population drops below the required 4,000 for the full comparative analysis approach.

Separately DNV GL have continued to work with NEL on method 4 live trials, identifying elements of the messaging design piece and engagement media that could be utilised by the community energy coaches. This has allowed both DNV GL and Behaviour change to remain actively involved in finessing the portfolio of ideas which will be utilised in live trials across methods 1-3 in January 2016 while also reviewing the original trial designs produced during the last reporting period. DNV GL also plan to re-start the Expression Of Interest process for LED installation suppliers and media provision in the next reporting period in partnership with SSEPD.

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 of BMG have attended all PPRBs within the reporting period to provide specific updates on recruitment progress, and Navetas have joined the most recent PPRB to offer information, support and to gain feedback on elements of equipment development and delivery. The purpose of the PPRB is to:

- Develop and implement a project plan that meets Project Direction, Full Bid Submission and SDRC requirements
- Record Project progress
- Review progress against the planned program (time and cost)

- Revise, where appropriate the Project plan to ensure progress continues to requirements
- Review risks and mitigations
- Capture and review project learning
- Ensure that the relevant information is provided for Innovation Steering Board meetings

Project assurance established as part of the Project Management approach ensures that:

- Thorough liaison between Suppliers, Project Partners, SEPD and Ofgem is maintained throughout the Project
- The Project remains viable
- Risks are controlled
- The Project is delivered in accordance with the Full Bid Submission and subsequent Project Direction
- Project participant needs are being met or managed
- Internal and external communications are working
- Any legislative constraints are observed
- The relevant resources are in place

These items are regularly checked to ensure delivery is consistent with, and continue to meet the scope of works in, the Full Bid Submission and subsequent Project Direction and that the SDRC are met. This has ensured that good progress has been made against all current deliverables and planning started for future work packages.

Through the monthly Project Partner Review Board meetings and additional smaller-scale meetings multiple areas of consideration have been addressed, ranging from equipment issues to engagement methods. Following a mixture of in-depth discussions and research, the following decisions on the approach to be taken have been agreed:

- Continued delay of live trials across methods 1-3 allowing replacement household monitors to be installed across the project population
- The restart of recruitment activities to be combined with the reinstallation of household monitoring equipment, allowing the outstanding 593 required participants to be recruited before the end of December 2016
- Appointment of a new household monitoring equipment supplier, Navetas, who will supply all household monitoring equipment and supporting data and user interface services
- The potential for 'self-installation' of the new household monitoring equipment, potentially reducing costs considerably and accelerating the re-installation process
- Revision of a formal Change Request detailing the need to extend the Project to allow the replacement of household monitoring equipment and collection of base data subsequent to equipment failures and loss of partner Maingate Enterprise Solutions
- Identification of additional analytical requirements within intervention method 4, the Community Energy Coaching trial, to ensure statistically significant results support trial outcomes



The next reporting period will be filled with key activities:

- Commence and complete re-installation of household monitors across existing 3,983 households in the study area, using results from the pilot installation to inform process improvements
- Resumption of recruitment activities by BMG enabling the Project to meet the target of 4,600 active participants monitored through the household monitoring solution
- 2<sup>nd</sup> live trials for Method 4, the Community Energy Coaching intervention led by NEL which will commence in October 2016
- Learning analysis from Method 4 intervention trial 1, base data collection from Project population and supporting analysis by UoS.

With the Partner work packages, review sessions and good communications maintained between most parties there are no additional issues expected in the next reporting period. The ongoing impacts of the previously experienced equipment issues have been mitigated and are the subject of constant and detailed monitoring by all Partners and suppliers.

### 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 constructed one formal change request within this reporting period which will be submitted in June 2016.

Change Request No.	Description
CR-2	Project Extension and Equipment Replacement. This change request will present the need for an extension to the project to allow replacement equipment to be re-installed across the Project population following the loss of Project Partner Maingate Enterprise Solutions, detailing the effects to deliverables and the management process for corrective actions.

## 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 SEPD, 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 SEPD 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 and in part due to the previously mentioned change request and equipment issues leading to its submission, there are 14 risks that fall into this category. These risks and how we are managing them are shown below:

Risk ref #	Risk Description	Inherent							Risk Control/Mitigation Actions	Residual						Inherent			Residual			Risk Review Date		
		Impact						Impact						Score	Contingency Cost (£k's)	Contingency Delay (wks)	Score	Mapping Ref	Contingency Cost (£k's)	Contingency Delay (wks)				
		Cost	Schedule	Reputation	Learning	Environment	People	Likelihood		Cost	Schedule	Reputation	Learning								Environment		People	Likelihood
WP1-2	Break up of Partnership	5	5	4	5	1	1	3	Contracts in place and regular PRBs allow for continued proactive contact to highlight any potential issues. Following equipment issue Maingate Enterprise Ltd have left the Project due to Administration, however other partners remain committed.	4	4	4	2	1	1	2	15	9.4	0.2	8	42	0.5	0.0	26/04/2016
WP1-3	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. SSEPD Legal and procurement teams supporting process however core concern that costs will exceed current project budget resulting in direct cost being passed to SSEPD or detailed in CR-2 to request additional funds from Ofgem .	4	4	3	3	1	1	3	20	93.7	2.3	12	43	4.7	0.1	26/04/2016
WP1-5	Lack of data available from the Trialzones and an overall lack of learning to SEPD.	4	5	4	5	1	1	4	Equipment issues experienced have been fully investigated with replacement equipment being sourced and corrective actions plan constructed in collaboration from all Project Partners. Severe delays have been caused by protracted discussions on liability. Change of suppliers has resulted in need to revisit and redesign data transfer and collection processes which will be informed by lessons learnt previously.	4	4	3	3	1	1	3	20	46.8	2.3	12	43	4.7	0.1	26/04/2016
WP1-9	Ofgem do not accept CR-2 requesting 12-month delay, change of equipment and associated costs as part of the corrective actions to replace faulty household monitoring equipment	5	5	4	5	1	1	4	All contributors to SAVE are supporting the corrective actions process and pilot of new equipment. Project Partners will commit written support of any formal change request and SEPD will review all documentation prior to submission and will also ensure most cost effective options are undertaken throughout.	4	5	3	4	1	1	3	20		15	53			26/04/2016	
WP1-11	New household monitoring solutions do not give required granularity of data or experience failures resulting in a loss of data.	4	4	3	5	1	1	3	Tendering process specifically looked at failure modes of previous equipment to avoid repeat issues. Data granularity was a core requirement and specifications for data frequency were also defined.	4	4	2	4	1	1	2	15		8	42			26/04/2016	
WP2-3	Failure of equipment and lack of data	4	4	4	5	1	1	3	Initial household monitoring equipment has now failed however alternative solutions have been assessed and optimum alternative now being sourced. CR-2 being constructed to allow process of corrective actions and the restoration of the Projects ability to effectively run trials 1-3.	3	3	4	4	1	1	3	15	4.7	0.1	12	43	2.3	0.1	26/04/2016
WP3-6	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	5	5	1	1	3	Substation monitoring equipment is functioning correctly and all data requirements have been agreed between UoS, EATL and SSEPD. The failure experienced within the household monitoring solution has impacted this WP and is now reliant on the replacement equipment functioning to expectation.	1	1	3	4	1	1	3	15	0.2	0.0	12	43	0.2	0.0	26/04/2016
WP5-2	Monitoring equipment cannot be installed	4	4	2	5	1	1	3	Experience from the initial recruitment process will inform the reinstallation process and potential alternative equipment is far simpler to install than the original kit.	3	3	1	3	1	1	2	15	4.7	0.1	6	32	0.2	0.0	26/04/2016
WP5-4	Noticeable differences in accuracy/ repeatability of data metering systems; Difficulties in statistical analysis so need to replace meters and repeat trials	5	5	5	5	1	3	5	Experience from initial data collection/processing/transfer/analysis activities have informed tendering requirements for new equipment supplier, with focus on data quality and analytical capabilities	3	3	3	3	1	2	3	25	936.6	23.3	9	33	2.3	0.1	26/04/2016
WP5-6	Failure in data management system; Loss or corruption of data; failure in equipment, data transfer & warehousing	3	4	2	5	1	1	5	Experience from initial activities shaping tendering requirements for new supplier, focus on data management, data retention in case of comms failure and guarantees over response times for data/kit failures	3	3	2	3	1	1	3	25	234.1	9.5	9	33	2.3	0.1	26/04/2016
WP5-7	Inability to synchronise meter readings and being given 15min or half hourly readings to interpret	2	3	1	4	1	1	4	New supplier will be tasked with providing reassurance on synchronised readings and adequate frequency to ease analysis	2	3	1	4	1	1	3	16		12	43			26/04/2016	
WP5-10	Provision of replacement equipment following failure in clip-ammeter and re-installation of new equipment across Project population. Management of costs associated with subsequent impacts to wider work packages	5	5	5	5	1	1	5	SSEPD Legal and Procurement teams supporting appointment of new equipment supplier and pursuing losses from Maingate's administration. Full partner involvement in production of corrective actions with specific focus on participant protection for the re-installation process. Formal change request to be constructed detailing requirements, impacts and actions which will be rigorously managed to ensure successful outcome.	4	4	3	3	1	1	4	25	936.6	23.3	16	44	46.8	0.9	26/04/2016
WP5-11	Small percentage of smart-plug installations overheating when used with a kettle. SEPD & supplier investigating caused but full smart-plug recall required.	3	2	5	4	1	3	4	Smart-plug recall completed and incidents confirmed on less than 0.25% of the projects equipment. Smart plugs remain transmitting in 78 properties who have not responded to calls, emails or letters. These properties to be re-visited asap to physically remove the plugs and confirm if participants wish to remain in the project	2	1	4	3	1	2	2	20	23.4	0.4	8	42	0.1	0.0	26/04/2016
WP8-1	Equipment faulty and data not available	3	5	3	4	1	3	4	Smart plugs now recalled following safety concerns relating to overheating on a small percentage of equipment. Once final 78 properties have been visited confirm all smart plugs removed and risk can be closed.	3	4	3	3	1	1	3	20	23.4	2.3	12	43	2.3	0.1	26/04/2016

## 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 eight Successful Delivery Reward Criteria (SDRC). 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 2016) and into the next reporting period (up to December 2016).

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

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	30/06/2016	Create commercial energy efficiency measures	Reliant on successful trials which have been affected by equipment issues outlined previously in this report. Delivery date for this SDRC is covered within formal Change Request 2 due to be submitted to Ofgem 30/06/16, which proposes a new delivery date of 30/06/2017
SDRC 2.2	30/12/2016	Revise Customer Model	Reliant on successful trials which have been affected by equipment issues outlined previously in this report. Delivery date for this SDRC is covered within formal Change Request 2 due to be submitted to Ofgem 30/06/16 which proposes a new delivery date of 30/12/2017
SDRC 7.2	30/12/2016	Revise Network Model	Reliant on successful trials which have been affected by equipment issues outlined previously in this report. Delivery date for this SDRC is covered within formal Change Request 2 due to be submitted to Ofgem 30/06/16 which proposes a new delivery date of 30/12/2017

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

<b>SDRC</b>	<b>Due</b>	<b>Description</b>
SDRC 3.2	31/01/2017	Hold meetings to share progress, experiences and next steps with customers involved in trials on a six monthly basis
SDRC 2.3	31/05/2018	Finalise customer model
SDRC 7.3	31/05/2018	Finalise network investment tool
SDRC 8.1	29/06/2018	Produce project closure report
SDRC 8.2	29/06/2018	Produce network investment tool key outcomes report (including comparison of trial method impacts)
SDRC 8.3	29/06/2018	Produce LED trial report
SDRC 8.4	29/06/2018	Produce DNO price signals direct to customers trial report
SDRC 8.5	29/06/2018	Produce network pricing model report
SDRC 8.6	29/06/2018	Produce customer and network modelling report
SDRC 8.7	29/06/2018	Produce data-informed engagement trial report
SDRC 8.8	29/06/2018	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 SDRC's completed within this reporting period and due to the ongoing issues with equipment and subsequent delays in live trials across methods 1-3 targeted dissemination has been minimal. Within method 4 multiple engagements have taken place however these have been entirely focussed on the delivery of intervention method 4 and will be reported through SDRC 8.8 – Community Coaching Trial Report and ad-hoc learning reports throughout the course of the project. The project has however been summarised at a number of smaller events, mainly SSEPD attended engagement during reviews of the LCNF portfolio of projects.

It is expected that within the next reporting period dissemination activities will recommence with particular focus on results from the first live trial within method 4, the Community Energy Coach due in late June 2016, and following success in the reinstallation of equipment the wider SAVE project.

### 6.2 Learning Moments

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

- The pilot reinstallation and corrective actions process have been ongoing work packages throughout the reporting period. Participant engagement methods and likely response to the self-installation process now preferred by the project have led to focussed discussion to ensure that participant fatigue and reputational damage to the project are minimised. The

partnership approach to all participant engagements, drawing expertise from suppliers and encouraging pro-active communications to support defined, frequent reporting scenarios have resulted in a robust reinstallation process which offers the best customer experience possible in this situation. The system development steps undertaken with former partner Maingate have been shared with the new supplier Navetas to ensure the user interface and registration pages which form the participant facing online interaction points are fully compliant with Project requirements. As part of this work Navetas have successfully removed all tariff indications and price comparison elements of their loop energy saver system for the ring-fenced project population. While these elements offer customers the ability to review the cheapest energy prices available across all suppliers, they do not adhere to LCNF Project governance or SSEPD business separation regulations, hence their removal was intrinsic to the Navetas system adoption by the SAVE project.

- The decision to pursue a self-installation of household monitoring equipment was primarily undertaken in response to increasing cost faced by the project due to the equipment failures experienced within the last reporting period. Initial concerns with this approach included the potential for increased attrition of the project sample, loss of equipment post mailing and complaints from participants who felt pressurised to install equipment themselves. At PPRB's and targeted meetings the Project team discussed mitigations to these concerns, such as sensitively constructed media, pre-paid envelopes included to encourage the return of any unwanted equipment and a proactive telephone campaign to follow initial letter mailings. Across these mediums each partner and supplier have offered improvements and adjustments which have been combined to produce a seamless, accessible experience for participants which encourages confidence in the project and the equipment to be installed.
- DNV GL and NEL have worked closely to identify elements of the trial design works completed in the latter stages of the last reporting period which could be utilised by the community energy coaches within method 4 live trials. The elements of design work, primarily message types including the 'can it wait 'till after 8' and demand shifting material, have been reviewed in combination with the method 4 sample area's and methods 1-3 population to minimise any potential sample spoil or participant 'fatigue' from excessive use. NEL have also planned further tailoring of the demand reduction/shifting messages based on community make up and demographic analysis, for example encouraging less use of dishwashers in more affluent area's vs more deprived area's as the expectation is there will be fewer dishwashers and therefor less demand shifted. This work is being driven by the community energy coaches themselves who are keen to ensure any engagement, messaging and interactions within the trial communities is sustainable, positive and reflective of the demographic make up resulting in more efficient and successful trials moving forward.
- Through the initial live trial of the community energy coach method the stakeholder engagement carried out has identified trends within specific communities which the project believes will be repeated in any BAU rollout of this intervention. A reduction in Local Authority



spending, centralisation of local services and changing demographics have reduced the potential engagement 'vehicles', for example local community centres and community groups, within more deprived communities. At this stage this outcome is generalised however ongoing studies, supported by the host organisations and UoS will confirm this throughout the project. The impact of this finding is that demand reduction within inner city/urban, more deprived area's will be much more complex, requiring DNO funded coaches to form these engagement vehicles with local aspirations combined from the onset, effectively increasing the preparation time before any demand reduction or demand shifting activity could be implemented and successful.

### 6.3 Dissemination Activities

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

Leading Partner	Date(s)	Description
SSEPD	10/02/2016	On the 10th February SSEPD met with representatives from the University of Portsmouth and the Isle of Wight Local Authority, primarily to discuss Active Network Management. During this meeting the SAVE project was summarised in context of the wider industry approach to the reduction and management of demand. Questions from attendee's included the target reductions expected from each trial method, the engagement approach undertaken for trials 2 and 3 and the potential replicability of the SAVE interventions across UK DNO's in response to the increasing need for reinforcements. SSEPD committed to sharing SAVE outputs and general updates to the attendee's with specific knowledge sharing sessions following successful live trials and model delivery elements as the project progresses.
NEL	10/03/2016	The SAVE Project team held a meeting with ENW on the 10th March to talk through their experience of the Power Saver Challenge, to discuss the community coaching trial within the project and share knowledge on demand side response experiences across the projects. A core discussion resulted which questioned the motivational impact of high value incentives and addressing priority elements when planning DSR activities with domestic communities. These elements were captured within the meeting for dissemination to the wider SAVE PPRB and included; <ul style="list-style-type: none"> <li>• stressing the importance of data integrity in terms of attributing the impact of interventions</li> <li>• the value of using trusted local 'messengers' to convey information</li> <li>• increased appreciation of the role of the DNO and greater brand recognition</li> <li>• relatively low historic levels of recorded demand reduction</li> <li>• aspiration in historic projects for a longer research period allowing assessment in the ongoing sustainability of changes</li> </ul> Again the project has committed to continue targeted meetings and disseminations with the ENW 'Power Saver Challenge' team with NEL arranging future sessions as live trial periods complete and learning generated.
SSEPD	24/03/2016	On the 24th March the SSEPD SAVE project team presented a summary of the SAVE Project and specifically a review of the intervention measures to be trialled to a group of energy efficiency suppliers, academics and Local Authority representatives at the Future Solent board meeting in Southampton. The aim of this dissemination was twofold, firstly to provide local interested parties with a positive summary of the project and its expected outcomes. Secondly was to encourage local response to the DNV GL EOI for LED provision and media services, planned to resume in August, meeting the wider area's aspirations to increase their market share of the green economy and carbon reduction industries and the projects objectives simultaneously.
SSEPD	14/04/2016	On the 14th April the SAVE project was summarized at the annual Berkshire IET SSEPD engagement evening alongside detailed reviews of the wider innovation portfolio. This annual event was implemented in 2015 following the ongoing success of the NTVV LCNF Tier 2 project, the Berkshire branch of the IET have displayed an increasing interest in this and other SSEPD innovations projects. While only a summary of the SAVE project interventions, planned learning delivery and potential impacts were provided, great interest was displayed across the delegates and requests for updates at future events received.

## 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.*

SSEPD'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, operational efficiency and innovation in electricity and gas 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, SEPD 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 the demand reduction in order to be able to rely on the demand reduction and 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 methods 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</b>	<b>Data informed engagement</b>	<b>DNO rebates</b>	<b>Community Coaching</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</b>	<b>Data informed engagement</b>	<b>DNO rebates</b>	<b>Community Coaching</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

SEPD 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>1</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>	£2,445,883	£310,005.09	25%	0	0	
<b>EQUIPMENT</b>	£553,890	£618,188.67	112%	0	0	
<b>CONTRACTORS</b>	£4,735,730	£2,148,530.23	88%	0	0	
<b>IT</b>	£753,321	£494,733.70	87%	0	0	
<b>TRAVEL &amp; EXPENSES</b>	£26,400	£12,889.32	97%	0	0	
<b>PAYMENTS TO USERS</b>	£428,302	£118,554.49	49%	0	0	
<b>DECOMMISSIONING</b>	£257,938	£0	-	0	0	
<b>OTHER</b>	£442,220	£0	-	0	0	

Notes:

The variance against budget lines is resultant from the previously detailed equipment issues, loss of project partner Maingate, appointment of a new supplier and subsequent delays to the project. A re-structure of the SAVE budget is being proposed within formal change request CR-2 which aims to rebalance the existing budget lines and phased expenditure to meet these additional costs and address the current variations.

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<sup>1</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 (project inception to end of November 2015)
Interest	£7,944.56
Payments out of account -	-£575,711.43
<b>Balance</b>	<b>£5,998,004.53</b>

## 10 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.

No Relevant Foreground IPR has been generated or registered during the December 2014 – June 2015 reporting period. 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.

## 11 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.

## 12 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 SEPD.

This report has been corroborated with the monthly minutes of the Project Steering Group<sup>2</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:	Alexander Howison	Project Manager
Reviewed by:	Colin Mathieson	Programme Delivery Manager
Final sign off:	Andrew Roper	Director of Engineering & Investment

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<sup>2</sup> The Project Steering Board meets as part of an overall SSEPD Innovation Steering Board

## Appendix - Redacted copy of bank account transactions

### Bankline



Statement for account \*\*-\*-\* \*\*\*\*\* from 01/12/2015 to 31/05/2016

Short name:	SOUTHERN ELECTRIC PO	Currency:	GBP
Alias:	SOUTHERN ELECTRIC PO	Account type:	SPECIAL INT BEARING
BIC:	*****	Bank name:	NATIONAL WESTMINSTER BANK
IBAN:	*****	Bank branch:	READING MKT PLACE

Date	Narrative	Type	Debit	Credit	Ledger balance
	<b>CLOSING BALANCE</b>				<b>5,998,004.53Cr</b>
25/05/2016	SOUTHERN ELECTRIC SAVE COSTS	EDP	83,540.93		5,998,004.53Cr
29/04/2016	SOUTHERN ELECTRIC SAVE	EDP	7,668.78		6,001,545.46Cr
31/03/2016	31MAR-GRS *****	INT		3,832.03	6,009,214.24Cr
29/03/2016	SOUTHERN ELECTRIC SAVE COSTS	EDP		17,085.18	6,005,382.21Cr
18/02/2016	SOUTHERN ELECTRIC SAVE COSTS	EDP	66,628.36		6,060,297.03Cr
19/01/2016	SOUTHERN ELECTRIC SAVE COSTS	EDP	208,555.99		6,134,925.39Cr
31/12/2015	31DEC-GRS *****	INT		4,112.53	6,343,481.38Cr
17/12/2015	SOUTHERN ELECTRIC SAVE COSTS	EDP	178,937.09		6,339,368.85Cr
04/12/2015	SOUTHERN ELECTRIC SAVE COSTS	EDP	30,380.28		6,510,305.94Cr
	<b>OPENING BALANCE</b>				<b>6,548,686.23Cr</b>
<b>Totals</b>			<b>575,711.43</b>	<b>25,029.74</b>	

ND: 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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