

**OPENING UP
THE SMART GRID**



OpenLV Community Trials

Memorandum of Understanding

Name of Trial Participant:

1 Overview

1.1 Outline description of project:

[Overview of the community and the proposed app rollout]

1.2 OpenLV project support

During the trials CSE will work with the Trial Participant to put in place a detailed project plan and logic model to identify success criterion, specify and develop a web based application or other means of utilising data from the OpenLV Platform, and provide support with community engagement, delivering and monitoring the project.

2 Background

2.1 OpenLV Community Trials

The OpenLV project's aim is to trial an open, flexible platform that could be deployed in every low voltage (LV) substation in Great Britain, as well as to demonstrate the platform's ability to provide benefits to the network, customers, commercial entities and research organisations.

The OpenLV Platform consists of a ruggedised PC with a Linux based operating system running the Low Voltage-Common Application Platform (LV-CAP™). This platform receives, stores and processes data from external LV monitoring equipment. These devices have sufficient computational power to store and run multiple apps and can provide relevant information out via a communications link to centralised server(s).

The OpenLV project is funded via Ofgem's Network Innovation Competition (NIC). It is a publicly funded project managed by EA Technology, working in partnership with Western Power Distribution. There are a range of suppliers to the project. Nortech and Lucy Electric

GridKey are providing technical support to ensure the monitoring equipment functions well and the data is sent and stored securely.

The Centre for Sustainable Energy (CSE) is managing the process of recruiting and supporting community groups who want to access substation data. CSE is also providing support with software engineering, community consultation and project management. Regen will monitor the progress of all the community projects, produce a record of what is learnt and share the lessons from the project more widely.

2.2 Timeframes for community trials

The apps are scheduled to be rolled out for trial from early September 2018, with trials concluding at the end of June 2019. During this 10-month period, CSE community and programming staff will be on hand to provide support to keep the trials on track, and each group will be assigned a CSE project mentor. The table below gives an outline of key project activities and dates.

Activity	Dates
Selection of substations	February to April 2018
Development of project plans	April / May 2018
Initial app design workshops and bespoke design sessions (where needed)	May / June 2018
Community consultation events	May / June 2018
Detailed app proposals finalised	June 2018
Data sharing agreements in place	June 2018
LV-CAP units installed	May to July 2018
Engagement literature produced	July / August 2018
Trials of apps	August 2018
Logic models finalized	August 2018
Full software development for apps	May to August 2018
App deployment and trial period	Sept 2018 to June 2019
Evaluation	July to September 2019

2.3 Reference documents

Reference documents providing further information regarding the overall OpenLV Project and the Community trials can be found here: <https://openlv.net/resources/resources-for-community-groups>. These include:

- Bid Document: The OpenLV Bid document provides an overview of the Open LV Project
- Community Trial Leaflet: This leaflet provides a high-level overview of the Community trials

- OpenLV Measurement Points Document: This document provides an overview of the data that will be collected and made available to trial participants
- OpenLV Public Application Programming Interface (API): This document provides information on how trial applicants can develop software applications to be deployed on the OpenLV platform that runs the LV-CAP™ operating system.

3 Memorandum of Understanding

3.1 Common Aspirations

- The main objective of this MoU is to confirm each Party's commitment to engage with the OpenLV Project to utilise low voltage Electricity Network Data and/or develop and implement Trial Software Application(s) on the OpenLV Platform.
- The Parties will work together to develop knowledge and learning from the Project Community Trials.
- Each Party acknowledges that the learning gained from the Project trials will be summarised and published in technical reports on the Project website and shared with Ofgem, who are funding the Project via the Network Innovation Competition (NIC).

3.2 Centre for Sustainable Energy (CSE) Obligations

- You will be assigned a **key contact person** from CSE's team who will be available for telephone and email enquiries. We will schedule fortnightly telephone catch up calls with you, to check progress and develop solutions for any problems that arise. CSE will take all reasonable steps to maintain continuity in relation to the support staff team.
- CSE staff can provide support with **community engagement** activity. This could include community engagement events, help recruiting users for your proposed web based application, facilitating the process of community members feeding into your app design concept, maintaining community engagement and momentum during your trials, support with development of communication materials, press releases and a web presence.
- CSE will help you to finalise a **logic model** and **project plan** for your project.
- CSE will work with you to define the **functionality** that will be delivered by the proposal outlined in your application form.
- A **CSE programmer** will be assigned to your project, providing software development expertise to specify and develop functionality for your web based application and any associated text or email based alert systems.
- CSE software engineers will not carry out any programming work for the development of phone-based apps (i.e. apps designed specifically for use on a mobile phone or

tablet), but will ensure that any third party app developer working for you can access the online resources CSE has produced for your web-based application.

- Where your project requires data downloads for **offline analysis and modelling**, CSE's research team will also be available for **up to 4 days over the life of the project** to help support your analysis (subject to scheduling).
- CSE will liaise with EA Technology to: Select and arrange installation of LV-CAP™ units and associated LV monitoring hardware at agreed substation(s) in your project area; Provide data, and maps as appropriate, on the number and location of buildings connected to each substation being monitored through the project; Provide communications infrastructure to support the transfer of data at a rate suitable for the Project trials, and maintain the OpenLV Platforms and associated LV monitoring hardware throughout the Project trials, ending in December 2019.

3.3 Trial Participant Obligations

- Utilise Electricity Network Data and/or develop a Software Application to be deployed on the OpenLV Platform as described in your application form, interview and subsequent app development discussions.
- Appoint a Technology Representative, who will be the main contact responsible for the overall development of the idea outlined in your application form.
- Work with CSE to define the functionality that will be delivered by the web based application developed for this project, including attending app design workshops or meetings.
- Hold a community consultation event to review the project aims and to refine app ideas with your community of users.
- Work with CSE to finalise a project plan, and to develop a logic model, including identifying success criterion, for cost benefit analysis of your project.
- Provide CSE with progress updates and key learning at fixed points throughout the trial time period. This will include a fortnightly phone update and responding to email communications within a reasonable timeframe, to check progress and develop solutions for any problems that arise. It should be noted that this will be led by CSE and will not involve any travel on behalf of the trial participant.
- Carry out (as appropriate to your project plan) ongoing community engagement activity to engage members of the local community with the project.
- Feed into promotion and dissemination activity for the OpenLV project, which could include case studies and photos, sharing news items and features about the project, and attending promotional events and meetings. Travel costs for attendance at any conferences will be paid.

- Inform CSE if you become aware of any issues with the units not functioning, being damaged or in any way interfered with.
- Participate in telephone interviews with Regen at the beginning and end of the project, complete a short survey during the project, and facilitate focus groups with community members as part of the project's evaluation.

3.4 EA Technology will provide

- The OpenLV Platform(s), which includes: the sensors required to collect voltage and current data from the LV substation; the hardware required to monitor the LV network (to connect to the sensors); the OpenLV Platform to take the data from the LV monitoring equipment and send it to the Cloud Hosted Server; and covering the costs for all of the above.
- Background Infrastructure, which includes: the server that is required to manage the OpenLV Platform(s) deployed as part of the Project trials and to deploy app(s) to the platform; the Cloud Hosted Server to enable trial participants to access the data collected on the OpenLV Platform(s).
- EA Technology reserves the right to install additional LV-CAP™ Software Application(s) on the OpenLV Platform provided to the Trial Participant, to maximise the learning on the Project.

4 Further conditions

4.1 Data protection

- The OpenLV team will use the information you provided in your application and assessment, and during the lifetime of the project to administer the overall programme and for research purposes. All information gathered in connection with this application, including correspondence, will be available to the OpenLV project partners: the Centre for Sustainable Energy (CSE), EA Technology, Western Power Distribution (WPD), Nortech, Lucy Electric GridKey, and Regen. Contact Bridget Newbery or Rachel Coxcoon at CSE if you have any questions about how we are storing and sharing your data.
- This requirement must be reflected in consent being sought by the Trial Participant from anyone whose personal data may be being collected for the purposes of the project. CSE can provide guidance on seeking consent and meeting General Data Protection Regulations.
- The project is publicly funded via Ofgem's Network Innovation Competition and therefore details of any products or technology developed with these public funds can be made openly available by Ofgem and/or the project partners.

4.2 Confidentiality

- The trial participant undertakes not to use the Confidential Information without the agreement of CSE and EA Technology.
- EA Technology is required to share the learning from the Project trials with Ofgem and publish the learning in technical reports on the Project website. EA Technology will not publish information that is classed as Confidential Information by the Trial Participant.
- CSE and EA Technology have the right to refer to the Trial Participant and this agreement in any publicity or other materials in relation to the Project without the Trial Participants consent.

4.3 Intellectual Property Rights

- The Intellectual Property Rights in the Trial Application Software (other than the Open-Source Software and the Third-Party Software) are, and shall remain, the property of the Trial Participant (or the appropriate third-party rights-owner(s), if any).

4.4 Software Licence

- The Trial Participant grants, subject to the terms of this agreement, CSE and EA Technology the non-exclusive right for the Implementation Period to use the Licensed Software and the Documents for any purpose.
- CSE and EA Technology may make such copies of the Licensed Software and Documents as are reasonably necessary for use in accordance with this agreement and for the purposes of backup and security. EA Technology has no right to make, or authorise the making of, any other copies of the Licensed Software.
- CSE and EA Technology may use the Licensed Software in conjunction with or incorporation within any other software at its sole discretion.
- EA Technology will not make use of the software after the Implementation Period unless a separate agreement is made with the Trial Participant.
- EA Technology may not make adaptations or variations of the Licensed Software without the prior consent of the Trial Participant.
- EA Technology may not disassemble, decompile, reverse translate or in any other manner decode the Licensed Software, without the without the prior consent of the Developer.
- EA Technology will not make use of the software after the Implementation Period unless a separate agreement is made with the Trial Participant.
- Use of any apps developed as part of this trial must be free to the end user.

4.5 Warranties

- The Trial Participant warrants and represents that:

- a) the Licensed Software and Documents are proprietary to the Trial Participant and that it has the right to license all Intellectual Property Rights in and to the Licensed Software and Documents to EA Technology; and
- b) use of the Licensed Software does not infringe the Intellectual Property Rights of any third party.
- Each Party warrants that it has full capacity and authority, and all necessary licences, permits and consents to enter into and perform this agreement and that those signing this agreement are duly authorised to bind the party for whom they sign.

4.6 Status of Memorandum of Understanding

- Nothing contained in this MoU shall make a Party a partner of the other Party and no Party shall hold out the other as such. No Party shall be entitled to make any promise or enter into any agreement on behalf of or pledge the credit of the other Party and no Party shall purport to do so.
- This MoU shall not be legally binding unless superseded by a formal agreement between the Parties.

4.7 Termination

- Either Party may terminate this agreement with immediate effect by giving written notice.
- Support from CSE and EA Technology will be withdrawn and trials will be closed before the end of the trial period if the Trial Participant fails to stay in touch with CSE and/or to report on progress against an agreed timetable, or fails to engage with Regen for the purposes of evaluation, for example participating in telephone interviews.

5 Definitions and interpretation

- **CSE:** the Centre for Sustainable Energy, leading on recruitment and support for community organisations participating in the trials.
- **Confidential Information:** Information of commercial value, in whatever form or medium, disclosed by one Party (or any of its affiliates) to the other Party (or any of its affiliates), including commercial or technical know-how, technology, information pertaining to business operations and strategies.
- **EA Technology:** Are responsible for the overall Project Management and delivery of the OpenLV project.
- **Electricity Network Data:** Means the electricity network data provided by EA Technology and Western Power Distribution (WPD) during the Project in relation the performance of and electricity demand at electricity substations owned and operated by WPD. The data provided to the OpenLV Platform is described here: [OpenLV Measurement Points Document](#).

- **Licensed Software:** The Software Application developed for the Trial Participant.
- **LV-CAP™ Software Application(s):** Software Applications that could be deployed on the OpenLV Platform that have not been developed by the Trial Participant.
- **LV-CAP™:** LV-CAP™ (Low Voltage Common Application Platform) is a hardware agnostic environment that in and of itself does not provide any direct functionality but instead makes available the environment in which various software applications, each designed to provide specific a network benefits (or benefits) can be deployed.
- **Network Innovation Competition:** The Electricity NIC is an annual opportunity for electricity network companies to compete for funding for the development and demonstration of new technologies, operating and commercial arrangements.
- **Ofgem:** Government regulator responsible for running the Network Innovation Competition (NIC). The funding source for the OpenLV project: [Electricity Network Innovation Competition](#).
- **OpenLV Platform:** Consists of a ruggedised PC with a Linux based operating system running the Low Voltage-Common Application Platform (LV-CAP™). This platform receives, stores and processes data from external LV monitoring equipment. These devices have sufficient computational power to store and run multiple software applications and can provide relevant information out via a communications link to centralised server(s). See: [OpenLV Platform Specification Design & Testing](#).
- **Open-Source Software:** Any software licensed under any form of open-source licence meeting the Open Source Initiative's Open Source Definition (set out at [www.opensource.org](#)) or any libraries or code licensed from time to time under the General Public Licence (as described by the Free Software Foundation and set out at [www.gnu.org](#)), or anything similar, included or used in, or in the development of, the Application, or with which the Trial Participant has compiled or to which it is linked.
- **Party or Parties:** EA Technology, CSE and the Trial Participant.
- **Technology Representative:** The person or people identified by the Trial participant as being responsible for working collaboratively to ensure the idea outlined by the Trial Participant in their application form is developed accordingly to the timescales agreed in this document.
- **Trial:** Means the OpenLV Community trials as described in the following document: [OpenLV Community Trials - Guidance for Applicants](#).
- **Trial Participant:** The organisation(s) applying to take part in the Community project trials (Defined as Method 3: OpenLV Extensibility in the OpenLV Bid document).
- **Third-Party Software:** The software programs proprietary to third parties which are to be provided to EA Technology without modification.
- **Trial Software Application:** Software application developed by the applicant that is named in the MoU.

6 Signatures

Signed for and on behalf of **[Trial Participant Organisation/Company Name]**

Name _____

Signed _____

Job Title _____

Date _____

Signed for and on behalf of Centre for Sustainable Energy

Name Simon Roberts

Signed _____

Job Title Chief Executive, Centre for Sustainable Energy

Date 16.4.18