



Company Secretary  
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*Promoting choice and value for  
all gas and electricity customers*

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Date: 21 December 2012

Dear Company Secretary,

**Project Direction ref: SEPD / I<sup>2</sup>EV-Innovation-squared: managing unconstrained EV connections / 21 December 2012**

Souther Electric Power Distribution plc (SEPD) submitted the project Innovation-squared: managing unconstrained EV connections on 17 August 2012 to be considered for funding through the Low Carbon Networks (LCN) Fund. In this year's decision<sup>1</sup>, we selected the project for funding.

We have issued this Project Direction to SEPD. It contains the terms to be followed by SEPD as a condition of Innovation-squared: managing unconstrained EV connections receiving funding through the LCN Fund. It must comply with these terms, which can be found in the schedule to this direction.

**Project direction**

Paragraph 3.77 of Section Two of the LCN Fund Governance Document states that a Project Direction must:

- set out the Project-specific conditions that a distribution network operator (DNO) is committing to in accepting Second Tier Funding<sup>2</sup>;
- require the DNO to undertake the Project in accordance with the commitments it has made in the Full Submission<sup>3</sup>. Where appropriate the Project Direction may therefore include extracts from the Full Submission;
- set out the Approved Amount for the Project, as defined in CRC13.28, that will form part of the calculation contained in the direction issued by the Authority under CRC13.16 (the Funding Direction); and
- set out the Project Budget that the DNO must report against and how variances against the Project Budget will be reported and approved.

These are described for Innovation-squared: managing unconstrained EV connections in the schedule to this condition.

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<sup>1</sup> <http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=55&refer=Networks/ElecDist/lcnf/stlcnf/year3>

<sup>2</sup> Second Tier Funding has the meaning given in CRC13.11.

<sup>3</sup> Unless otherwise specified, defined terms (terms in capitals) in this Project Direction are defined in Section seven of the LCN Fund Governance Document.

## **Decision**

Provided SEPD complies with the LCN Fund Governance Document and the schedule to this Project Direction, Innovation-squared: managing unconstrained EV connections is deemed to be an Eligible LCN Fund Project<sup>4</sup>.

This Project Direction constitutes notice pursuant to section 49A (Reasons for decisions) of the Electricity Act 1989.

### **Andrew Burgess**

Associate Partner, Transmission and Distribution Policy

**For and on behalf of the Authority**

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<sup>4</sup> Eligible LCN Fund Project has the meaning given in part G of Charge Restriction Condition (CRC) 13.

# Schedule to Project Direction

## 1. TITLE

Project Direction ref: SEPD / I<sup>2</sup>EV - Innovation-squared: managing unconstrained EV connections / 21 December 2012

## 2. PREAMBLE

This Project Direction issued by the Gas and Electricity Markets Authority (the "Authority") to Southern Electric Power Distribution plc (the "Funding DNO") pursuant to the LCN Fund Governance Document issued pursuant to Part E of Charge Restriction Condition 13 (Low Carbon Networks Fund) ("CRC 13") of the Electricity Distribution Licence (the "Licence") sets out the terms to be followed in relation to I<sup>2</sup>EV - Innovation-squared: managing unconstrained EV connections (the "Project") as a condition of it being funded under the Second Tier and Discretionary Funding Mechanism<sup>5</sup>.

Unless otherwise specified, defined terms in this Project Direction are defined in Section Six of the LCN Fund Governance Document.

References to specific sections or appendices of the Funding DNO's Full Submission in this Project Direction are, for ease of reference, made by referring to the section or appendix number in the Funding DNO's Full Submission pro-forma.

## 3. Condition Precedent

The tasks referenced to below are shown in Annex 2.

The Funding DNO will not access any funds from the Project Bank Account until it has signed a contract with the Project Partner named in Table 1.

### Table 1: Condition Precedent 1

EA Technology Limited
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The Funding DNO will not access any funds from the Project Bank Account for Task 2.2 (Social trials) and 2.3 (Technical trials) until EA Technology Limited has signed a contract with the Project Partner named in Table 2.

### Table 2: Condition Precedent 2

Promote Design & Marketing Limited (NB. Automotive Comms is a trading name of Promote Design & Marketing Ltd)
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The Funding DNO will not access any funds from the Project Bank Account for Tasks 3.3 (Engage with charging point manufacturers) and 3.4 (Integrate technology with charging points) until EA Technology Limited has signed contracts with the Project Partners named in Table 3.

### Table 3: Condition Precedent 3

Nissan Motor (GB) Limited
Charge Your Car (North) Limited

The Funding DNO will not access any funds from the Project Bank Account for Tasks 4.1 (Managing subsidised rental programme for fleet users), 4.2 (Managing collection and delivery of cars), 4.3 (Finding trial (fleet) participants and providing funding / risk of

<sup>5</sup> Second Tier and Discretionary Funding Mechanism has the meaning given in CRC 13.3(b).

funding), 4.4 (EV leasing costs (fleet), 4.7 (Install technology and charging points) and 4.8 (Removal of charging points at end of trial until EA Technology Limited has signed contracts with the Project Partners named in Table 4.

**Table 4: Condition Precedent 4**

Nissan Motor (GB) Limited
Fleetdrive Management Limited (NB. Fleetdrive Electric is a trade name of Fleetdrive Management Ltd)
Charge Your Car (North) Limited

The Funding DNO will not access any funds from the Project Bank Account for Task 6 (Trial participant interviews) until EA Technology Limited has signed a contract with the Project Partner named in Table 5.

**Table 5: Condition Precedent 5**

De Montford Expertise Limited (NB. The legal name for research services of DeMontfort University, Leicester)
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The Funding DNO will not access any funds from the Project Bank Account for Task 7 (Network Modelling) until EA Technology Limited has signed a contract with the Project Partner named in Table 6.

**Table 6: Condition Precedent 6**

The University of Manchester
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The Funding DNO will not access any funds from the Project Bank Account for Task 9 (Project recommendations and implementation) until EA Technology Limited has signed contract(s) with the Project Partners who successfully tender for undertaking the Independent Project Evaluation task.

If the Funding DNO does not sign contracts with Project Partners named in Table 1 or EA Technology Limited does not sign contracts with the Project Partners named in Tables 2 to 6 and Northern Powergrid Holdings Company Limited, then the Funding DNO will not be considered to have undertaken the Project in accordance with this Project Direction.

#### **4. COMPLIANCE**

The Funding DNO must comply with CRC 13 and the LCN Fund Governance Document as may be modified from time to time in accordance with CRC 13 and this Project Direction, except in respect of Section Five – Intellectual Property Rights.

Any part of the Approved Amount that the Authority determines not to have been spent in accordance with this Project Direction (or the LCN Fund Governance Document) is deemed to be Disallowed Expenditure.

Pursuant to CRC 13.14 Disallowed Expenditure is revenue received (whether by the Funding DNO or another DSP<sup>6</sup>) under the Second Tier and Discretionary Funding Mechanism that the Authority determines not to have been spent in accordance with the provisions of the LCN Fund Governance Document or those of the relevant Project Direction.

Pursuant to paragraph 3.121 of Section Two of the LCN Fund Governance Document, Disallowed Expenditure includes any funds that must be returned if the Project is halted without Ofgem's<sup>7</sup> permission, any funds that have not been spent in line with the approved

<sup>6</sup> As defined in the Licence.

<sup>7</sup> Ofgem is the offices of the Gas and Electricity Markets Authority. The terms 'Ofgem' and 'Authority' are used interchangeably in this Project Direction.

Project Budget contained within the Project Direction, and any unspent funds on the completion of the Project.

## **5. APPROVED AMOUNT FOR THE PROJECT**

The Approved Amount is £4,175k.

## **6. PROJECT BUDGET**

The Project Budget is set out in Annex 1. The Funding DNO must not spend more than 110% of any category total (e.g. "Labour") in Annex 1 without the Authority's prior consent (such consent is not to be unreasonably withheld).

The Funding DNO will report on expenditure against each line under the category total in the Project Budget, and explain any projected variance against each line total in excess of 5% as part of its detailed report which will be provided at least every six months, in accordance with paragraph 3.95 of Section Two of the LCN Fund Governance Document. Ofgem will use the reported expenditure and explanation to assess whether the funding has been spent in accordance with the LCN Fund Governance Document or with this Project Direction.

For the avoidance of doubt this reporting requirement does not change or remove any obligations on the Funding DNO with respect to reporting that are set out in the LCN Fund Governance Document.

## **7. PROJECT IMPLEMENTATION**

The Funding DNO must undertake the Project in accordance with the commitments it has made in the Full Submission approved by the Authority pursuant to the LCN Fund Governance Document and the terms of this Project Direction. These include (but are not limited to) the following:

- (i) undertake the Project in accordance with the description set out in Section 2 (Project Description);
- (ii) provide a DNO Compulsory Contribution of £474.94k
- (iii) complete the Project on or before the Project completion date of 31 December 2015; and
- (iv) disseminate the learning from the Project at least to the level described in Section 5 (Knowledge Dissemination).

## **8. CUSTOMER RECRUITMENT**

The Funding DNO must recruit sufficient customers to ensure that the Project provides statistically significant learning. In particular, the Funding DNO must:

- (i) ensure that at least 100 customers sign contracts to take part in the technical trials as described in Section 2 (Project Description) (Trial Participants). The Funding DNO must use reasonable endeavours to ensure Trial Participants are connected to at least 7 different low voltage feeders. There must be at least 10 Trial Participants on each of these 7 different low voltage feeders.
- (ii) ensure Trial Participants have signed contracts as required under (i) above within 12 months of the Authority's approval of the customer engagement plan and data protection strategy required under paragraphs 3.89 and 3.93 of section 2 of the LCN Fund Governance Document.
- (iii) submit the customer engagement plan and data protection strategy for approval by the Authority by 1 February 2013.

(iv) not use more than £310k for Task 4 (Establishment of customer/cluster trials), £11k for Task 5 (Monitoring first trial) or £37k for Task 6 (Trial participant interviews) as described in Section 2 (Project Description) for an individual Trial Participant until it has recruited at least 9 other Trial Participants on the same LV feeder.

(v) not use more than £310k for Task 4 (Establishment of customer/cluster trials), £11k for Task 5 (Monitoring first trial) or £37k for Task 6 (Trial participant interviews) as described in Section 2 (Project Description) for an individual Trial Participant until it has recruited at least 10 Trial Participants on the same LV feeder on 6 other LV feeders.

(vi) must submit a report to the Authority each time 10 Trial participants on the same LV feeder have signed contracts explaining the progress of customer recruitment. If, based on these reports, the Authority considers that recruitment of Trial Participants is progressing such that the requirements of (ii) will be met, it may issue an amendment to this Project Direction to change the amounts specified under (iv) and (v) above.

(vii) not use funding allocated to Task 7 (Modelling), 8 (Consultation with EV manufacturers – cycle times) or 9 (Project and regulatory recommendations and implementation) as described in Section 2 (Project Description) until Trial Participants have signed contracts as required under (i).

(viii) not use funding allocated to the years 2014-15 or 2015-16 until Trial Participants have signed contracts as required under (i) above.

(ix) must submit a recruitment progress report to the Authority within 12 months of the approval of the customer engagement plan and data protection strategy. This report must demonstrate how many Trial Participants have signed contracts and how this allows the project to deliver all learning outcomes as described in Appendix C – I<sup>2</sup>EV Project Learning Outcomes and all Successful Delivery Reward Criteria as described below in 12. **SUCCESSFUL DELIVERY REWARD CRITERIA.** If, based on the evidence provided, the Authority considers that the Funding DNO can deliver the learning outcomes, SDRCs and the benefits described in Section 4 (Evaluation Criteria) by investigating a different permutation of Trial Participants than required under (i) above, the Funding DNO may apply to amend the Project Direction to change the clustering criteria in (i) and, where appropriate, the Full Submission.

If (ii) is not met then the Funding DNO must put a request to the Authority to halt the Project. The Authority will then follow the steps under paragraphs 3.107 to 3.111 of the LCN Fund Governance Document.

## **9. REPORTING**

Ofgem will issue guidance (as amended from time to time) about the structure and content of the reports required by paragraph 3.95 of Section Two of the LCN Fund Governance Document. The Funding DNO must follow this guidance in preparing the reports required by paragraph 3.95 of Section Two of the LCN Fund Governance Document.

As required by paragraph 3.97 of Section Two of the LCN Fund Governance Document, the Funding DNO must inform the Authority promptly in writing of any event or circumstance likely to affect its ability to deliver the Project as set out in its Full Submission and this Project Direction.

## **10. COST OVERUNS**

The maximum amount of Discretionary Funding that the Funding DNO can request as additional funding for cost overruns on the Project is 0%<sup>8</sup>.

## 11. INTELLECTUAL PROPERTY RIGHTS (IPR)

In Section 5 (Knowledge Dissemination) the Funding DNO has stated that the Project does conform to the default IPR arrangements set out in Section Five of the LCN Fund Governance Document v5, published 19 March 2012 and must therefore undertake the Project in accordance with these default IPR arrangements.

## 12. SUCCESSFUL DELIVERY REWARD CRITERIA

The Project will be judged by the Authority for the purposes of the Second Tier Successful Delivery Reward against the Successful Delivery Reward Criteria set out in Table 2<sup>9</sup> below (that comply with paragraphs 3.27 of Section Two of the LCN Fund Governance Document).

**Table 2. Successful Delivery Reward Criteria**

Successful Delivery Reward criterion	Evidence
<p>9.1 Document the learning from the experience of a third party leading a Tier 2 bid including suggestions for where the process could be more open or streamlined.</p> <p>This will include: structure of the project, interaction with the DNO, establishment of project partners, project costing, bid development commitment (costs and time), IPR positions, risk sharing principles and Ofgem Expert Panel / Consultant process.</p> <p><b>Related learning:</b> Learning outcome C1.2.1 - what learning has come out of the bid process?</p> <p><b>Related Task:</b> 0 - Novel commercial agreement</p> <p><b>Related commercial aims:</b> Under 2.2 the commercial aims are to: - Demonstrate delivery of a low carbon network project by a non-DNO on behalf of a DNO (see 'commercial innovation delivery framework' on page 10)</p>	<p>9.1.1 The provision of a report outlining key areas of learning in the identified areas, with recommendations. The reports will be written such that they can be published in the public domain for an audience of: DNOs, Ofgem or other interested third parties who may wish to lead a LCN Fund project in collaboration with a DNO, <b>(available by end of month 2, February 2013).</b></p>
<p>9.2 The blueprint of the contractual arrangements put in place with the DNO for a third party lead on a LCN Fund Tier 2 project.</p> <p><b>Related learning:</b> Learning outcome C1.2.2 - what form are the contracts? Learning outcome C1.2.3 - how are the risks managed with the DNO? Learning outcome C1.2.4 - what form does the programme management take?</p>	<p>9.2.1 Make available the initial contract template used between SEPD and EA Technology together with supporting guidance of the thinking behind key clauses. This will be made available to Ofgem and other DNOs as a starting point for use in future projects <b>(available by end of month 4, April 2013).</b></p> <p>9.2.2 Review of the contract put in place between SEPD and EA Technology. A review of the initial contract developed in</p>

<sup>8</sup> This is the amount requested by the Funding DNO in its Full Submission.

<sup>9</sup> These are the Successful Delivery Reward Criteria set out in the Funding DNOs Full Submission

<p><b>Related Task:</b> 0 - Novel commercial agreement</p> <p><b>Related commercial aims:</b> Under 2.2 the commercial aims are to:  - Develop a novel commercial arrangement (see traditional and I<sup>2</sup>EV models on page 17)  - Enable all procurement related to the project activity to be managed by a non-DNO</p>	<p>9.2.1 focussing on what worked well, what didn't work well, and what should be done differently in the future (<b>month 34, October 2015</b>).</p> <p>9.2.3 An updated contract template taking into account learning from 9.2.2 (<b>month 36, December 2015</b>).</p>
<p>9.3 An assessment, based on direct experience, of how a third party can effectively manage delivery on innovative projects with a DNO, and whether this allows DNOs to take on more innovation projects.</p> <p><b>Related learning:</b>  Learning outcome C1.1.1 - what is the management and interface process with the DNO?</p> <p>Learning outcome C1.1.2 - how is 'buy-in' and engagement achieved within a DNO?  Learning outcome C1.1.4 - how does learning become business as usual when project is non-DNO led?</p> <p>Learning outcome C1.3.1 - how is expedient deployment achieved - benefits/other over DNO-led approach?</p> <p><b>Related Task:</b> 0 - Novel commercial agreement</p> <p><b>Related commercial aims:</b> Under 2.2 the commercial aims are to:  - Demonstrate delivery of a low carbon network project by a non-DNO on behalf of a DNO (see 'commercial innovation delivery framework' on page 10).</p>	<p>9.3.1 Report detailing processes established and utilised throughout the project including templates of any forms (e.g. work orders for SSEC staff) and records of meetings/regular communications created as part of the process. This will include an evaluation of the collaboration between SSEPD and Northern Powergrid with a 3<sup>rd</sup> party interface.</p> <p>9.3.2 A framework to enable update suggestions to SSE policies and/or procedures, identified during the course of the project will be provided, (e.g. A procedure detailing the necessary steps when considering a customer's request for an EV charging point).</p> <p>9.3.3 An assessment from the participating DNO of the level of effort expended on Project Management of the I<sup>2</sup>EV task by the staff involved in comparison to previous innovation projects.</p> <p><b>Achieved by month 34, (October 2015).</b></p>
<p>9.4 An assessment of how the DNO and other interested parties can ensure independent validation of a third party's Solution throughout a project, and upon completion.</p> <p><b>Related learning:</b>  Learning outcome C1.3.2 - how are the project and results validated?</p> <p><b>Related Task:</b> 9 - Project recommendations and implementation</p> <p><b>Related commercial aims:</b> Under 2.2 the commercial aims are to:  - Demonstrate delivery of a low carbon network project by a non-DNO on behalf of a</p>	<p>9.4.1 The provision of 6 monthly independent reviews of the project and technology with specific inclusion of improvements and adaptations to working practices incorporated by the project team following the previous independent review.</p> <p>(a) Produce 6 monthly report (highlighting strengths and improvement areas) to be tabled at steering group meetings.  (b) Produce response to 6 monthly report, detailing improvements planned by Project Steering Group, as a result of the review.</p> <p><b>Achieved by months 7, 13, 19, 25, 31, and 36.  July 2013, January &amp; July 2014,</b></p>



<p>DNO (see 'commercial innovation delivery framework' on page 10)</p>	<p><b>January, July &amp; December 2015.</b></p>
<p>9.5 Sign up and involvement of sufficient customers in the trial to adequately test the Technology.</p> <p><i>This trial is attempting to simulate a future network where large numbers of high loads, such as EVs, are connected (clustered) in close proximity to one another. Getting enough customers on board in the trial to emulate this is therefore key to test the technical Solution</i></p> <p>.</p> <p><b>Related learning:</b> Learning outcome T1 - To what extent can DNO direct demand control facilitate the connection of low carbon technology?</p> <p><b>Related Tasks:</b> Task 4 - Establishment of customer / cluster trials; Task 5 - Monitoring the trials</p> <p><b>Related Technical aims:</b> Under 2.2 the technical aims are to: - Learn customer driving and charging habits and the implications for control via the Technology; - Evaluate the range of networks where it can operate successfully and identify any type of networks that are inappropriate.</p>	<p>9.5.0 <b>Customer engagement:</b> submission of customer engagement plan and data protection strategy for Authority approval (1 February 2013). <i>Assuming that the Customer Engagement Plan (CEP) is approved by 28 February 2013, cluster engagement will commence under timescales relative to that point with March 2013 being month 1 for cluster engagement metrics).</i></p> <p>9.5.1 <b>Technology trials:</b> Establishment of the cluster groups to trial the Solution - Sign up of 3 cluster groups (<b>month 9 of project, September 2013</b>). - Sign up of 5 cluster groups (<b>month 12 of project, December 2013</b>). - Sign up of 100 customers in at least 7 cluster groups with at least 10 customers in each of the 7 cluster groups <b>before the end of 12 months following approval of customer engagement plan and data protection strategy</b> - Sign up of 10 cluster groups (<b>month 18 following CEP, August 2014</b>).</p> <p>9.5.2 All cluster funding allocated due to successful establishment of clusters (<b>month 18 following CEP, August 2014</b>).</p> <p>9.5.3 <b>Social trials:</b> Minimum of 100 EV drivers signed up to have their driving habits recorded (<b>month 18 following CEP, August 2014</b>). (a) Reports presented to the monthly project meetings to capture and log progress in signing up customers to the EV trials (b) Six monthly reports to steering group on trial engagement progress</p>
<p>9.6 An assessment of the public acceptance (or otherwise) to Demand Side Response of EVs (or HPs as defined in 9.5) using this sort of technology.</p> <p><b>Related learning:</b> T.1.1.1 - how does a trial encourage the uptake of low carbon technology? T.1.1.2 - what social factors have an impact on the use of the Technology? T.1.1.3 - how can a trial be used to educate customers about the electricity network and low carbon technologies?</p> <p><b>Related Task:</b> 6 - Trial participant</p>	<p>9.6.1 A report documenting the finding from the socio-economic analysis on public reaction to the technology.</p> <p><b>Achieved by month 34, (October 2015).</b></p>

<p>interviews</p> <p><b>Related Technical aims:</b> Under 2.2 the technical aims are to:  - Learn customer driving and charging habits and the implications for control via the Technology.</p>	
<p>9.7 An assessment of the most appropriate integration of the Technology for different applications and suitable cycling times or reasons why this is not possible if the trials are not successful.</p> <p><b>Related learning:</b>  Learning outcome C1.1.3 - what is the interface and management process for other manufacturers?  T.1.1.2 - will customers accept direct control and under what circumstances?  T.1.2.4 - how do the needs of EV charging (or other loads) affect the settings?</p> <p><b>Related Task:</b> 3 - Integration of the Technology with charging points  <b>Related Technical aims:</b> Under 2.2 the technical aims are to:  - Develop and trial the equipment to ascertain its ease of installation.  - Develop the integration of the Technology into the EV charging points including how existing intelligence and attributes in charging points can be harnessed to reduce the cost and improve the performance.</p>	<p>9.7.1 Documentation describing:  (a) Views of the OEM community of the impact (if any) that cycling of EVs (or HPs) may have on their product(s) and end of life  (b) Recommendations of suitable cycle times for EVs (and possibly Heat Pumps) for demand-side response  (c) Evidence of whether this solution would be feasible or not combining learning from 9.5, 9.6.</p> <p><b>Achieved by month 30, (June 2015).</b></p>
<p>9.8 An assessment of how much headroom this sort of technical solution would yield, considering different network topologies and load types.</p> <p><b>Related learning:</b>  T1.2.1 - how much headroom is released?  T1.2.2 - how close to thermal rating should load be before deployment?  T1.2.3 - on what type of networks can the technology be used?  T1.2.4 - how do the needs of the EV charging (or other loads) affect the settings?</p> <p><b>Related tasks:</b> 5 - Monitoring the trials  <b>Related Technical aims:</b> Under 2.2 the technical aims are to: - Evaluate how often switch off routines are likely to be initiated from real life trials and extrapolation via modelling using the results; - From the results and extrapolation via modelling, estimate the typical and maximum thermal capacity gained.</p>	<p>9.8.1 Modelling to understand additional headroom available / other network benefits from using the Technology.  (a) The models will assess the % of thermal and voltage headroom estimates produced.  (b) The project will deliver an updated Solution template(s) specific to the Technology, and any updated EV charging profiles for use in the GB Smart Grid Forum modelling (e.g. WS3 model  <a href="http://www.ofgem.gov.uk/Networks/SGF/Publications/Documents1/WS3%20Ph2%20Solution%20Annex%20V1.0.pdf">http://www.ofgem.gov.uk/Networks/SGF/Publications/Documents1/WS3%20Ph2%20Solution%20Annex%20V1.0.pdf</a>).</p> <p>9.8.2 Potential cost savings and carbon emission savings using DECC published carbon intensity figures. If technology is unsuccessful, reasons why will be stated.</p> <p><b>Achieved by month 35, (November 2015).</b></p>

The maximum amount of the Second Tier Successful Delivery Reward (which will not exceed the DNO Compulsory Contribution) that the Project will be eligible for is £474.94k.

### **13. USE OF LOGO**

The Funding DNO and Project Partners, External Funders and Project Supporters<sup>10</sup> may use the LCN Fund logo for purposes associated with the Project but not use the Ofgem or Ofgem E-Serve logos in any circumstances.

### **14. AMENDMENT OR REVOCATION**

As set out in the LCN Fund Governance Document and this Project Direction, this Project Direction may be amended or revoked under the following circumstances:

- (i) if the Funding DNO considers that there has been a material change in circumstance that requires a change to the Project Direction or Full Submission, and the Authority agrees (paragraph 3.98 of Section Two of the LCN Fund Governance Document); or
- (ii) if Ofgem agrees to provide Discretionary Funding, which requires the re-issue of the Project Direction (paragraph 3.102 of Section Two of the LCN Fund Governance Document); or
- (iii) if the Funding DNO applies for Discretionary Funding to cover a decrease in Direct Benefits and the Authority decides it would be in the best interest of customers to make changes to the Project Direction before the Discretionary Funding would be awarded (paragraph 3.105 of Section Two of the LCN Fund Governance Document).
- (iv) If, based on the reports required above under (vi) of 8. CUSTOMER RECRUITMENT, the Authority considers that recruitment of Trial Participants is progressing such that the requirements above under (ii) of 8. CUSTOMER RECRUITMENT will be met, it may issue an amendment to this Project Direction to change the amounts specified above under (iv) and (v). of 8. CUSTOMER RECRUITMENT.

### **15. HALTING OF PROJECTS**

This Project Direction is subject to the provisions contained in paragraphs 3.107 to 3.111 of Section Two of the LCN Fund Governance Document relating to the halting of projects. By extension, this Project Direction is subject to any decision by the Authority to halt the Project to which this Project Direction relates and to any subsequent relevant Funding Direction issued by the Authority pursuant to CRC 13.16.

In the event of the Authority deciding to halt the Project to which this Project Direction relates, the Authority may issue a statement to the Funding DNO clarifying the effect of that halting decision as regards the status and legal force of the conditions contained in this Direction.

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<sup>10</sup> As listed in Box 1.5 in Section 1 of the Full Submission pro-forma.

## **Annex 2: I<sup>2</sup>EV Project Tasks**

<b>Task ID</b>	<b>Task Title</b>	<b>Task Description</b>
<b>0</b>	<b>Novel commercial agreement</b>	
0.1	Establish the 3rd party delivery commercial framework (yr 1)	Draft and agree the contract for a non-DNO to manage a LCNF Tier 2 project.
0.2	Review the commercial framework and recommend changes (yr 3)	Review the initial contract towards the end of the project and make necessary changes following the lessons learnt.
<b>1</b>	<b>Initial background - evaluation of initial trial</b>	
1.1	Evaluation of initial on-site trial	Evaluation of the initial trial of the Esprit Technology (December 2012) to improve the Technology and the plans of trials to occur as part of the I <sup>2</sup> EV Project.
1.2	Literature survey - additional load	Literature survey of the estimates regarding additional load to be introduced from EVs and the potential for load shifting.
1.3	Literature survey - customer behaviour	Literature survey of the existing knowledge of customer behaviour with respect the use of EVs and the acceptance of direct control appliances.
<b>2</b>	<b>Customer engagement</b>	
2.1	Customer engagement plan	Develop customer engagement plan for the I <sup>2</sup> EV Project.
2.2	Social trials	Engagement with Nissan, Charge Your Car North Ltd and Fleetdrive to approach EV owners throughout the UK with the intention of monitoring and recording location, driving and charging habits in statistically significant numbers.
2.3	Technical trials	Establishment of statistically significant clusters, relative to the individual network, to trial the Technology on multiple network types and across multiple demographics.
<b>3</b>	<b>Integration of the Technology with charging points</b>	
3.1	Technology development of Esprit	
3.2	Ongoing development of Esprit during project	Development of the Esprit Technology, integrating learning from the Project (not to be funded under LCNF)
3.3	Engage with charging point manufacturers	Liaise with charging point manufacturers to discuss the Technology and the impact on their equipment.
3.4	Integrate technology with charging points	Work on integration of the Technology (Logic and Communication Systems) into Charging Points.
<b>4</b>	<b>Establishment of Customer / Cluster trials</b>	
4.1	Managing subsidised rental	Management of the vehicles and participants in

<b>Task ID</b>	<b>Task Title</b>	<b>Task Description</b>
	programme for fleet users	the Fleet Trials.
4.2	Managing collection and delivery of cars	Delivering and managing the Fleet Trial Participants.
4.3	Finding trial (fleet) participants and providing funding / risk of funding	Identification, discussion and engagement with Fleet Trial Participants.
4.4	EV leasing costs (fleet)	EV leasing costs (fleet)
4.5	Engage with local network cluster(s)	Identification, discussion and engagement with local network clusters.
4.6	Assess network(s)	Assessment of the local networks around potential cluster locations to validate the suitability of the site for participation in the trial.
4.7	Install technology and charging points	Install technology and charging points
4.8	Removal of charging points at end of trial	Removal of charging points at end of trial
<b>5</b>	<b>Monitoring the trials</b>	
5.1	Monitor and download data	Data to be collected on a monthly basis during each trial.
5.2	Report on data (6 monthly)	Report summarising high level analysis of gathered data.
5.3	Uninstall monitoring at end of trial	Removal of any charging points as required.
<b>6</b>	<b>Trial participant interviews</b>	
6.1	Develop interview pack	Develop interview pack for social and technical trial participants.
6.2	Pre-trial interviews	Undertake pre-trial interviews.
6.3	During trial interviews	Undertake during-trial interviews.
6.4	Post-trial interviews	Undertake post-trial interviews.
6.5	Socio-economic modelling	Modelling and analysis of the data gathered as part of the social trials.
6.6	Make recommendations and report	Recommendations as to the anticipated acceptance of the Technology.
<b>7</b>	<b>Network Modelling</b>	
7.1	Network modelling and analysis contract	Develop a test network based on the information gathered from the trials.
7.2	Model the test network	Undertake simulation and modelling of the test network.
7.3	Extrapolate to different network types and locations	Extrapolate to different network types and locations.
7.4	Compare the results with existing work identified in literature survey	Compare the results with existing work identified in literature survey.
7.5	Estimate savings through the use of the Solution	Estimate savings that could be achieved using the Technology on wider networks.
<b>8</b>	<b>Consultation with EV manufacturers - cycle times</b>	
8.1	Agree the cycle times for	Discussion with EV manufacturers to prevent

<b>Task ID</b>	<b>Task Title</b>	<b>Task Description</b>
	the Technology with OEMs	premature ageing of EV batteries as a result of charging cycles.
<b>9</b>	<b>Project recommendations and implementation</b>	
9.1	Independent evaluation (Project and Solution)	Monitoring and evaluation of the project by an independent party.
9.2	How might the solutions be used by DNO planners as part of BAU	Make recommendations as to the ideal uptake of the Technology/solution by DNOs.
9.3	Technical framework recommendations	Identify and elements of the Project Framework that if changed, would improve the Technical development of the Project.
9.4	Commercial framework recommendations	Identify and elements of the Project Framework that if changed, would improve the Commercial development of the Project.
<b>10</b>	<b>Dissemination</b>	
10.1	Develop dissemination / comms plan	Develop the plans for Project Learning Dissemination and Communication with Stakeholders.
10.2	Implement communications plan	Implement the Communication Plan.
10.3	Reporting of SDRC outputs	Reporting of SDRC outputs.
<b>11</b>	<b>Programme Management</b>	
11.1	Programme management to deliver the project	Programme management to deliver the project.
11.2	Project governance and support	Project governance and support.
11.3	DNO project review and results	DNO project review and results.
<b>12</b>	<b>Project Contingency</b>	<b>Project Contingencies appropriate to the Risks.</b>