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Date: 19 December 2014

Dear Company Secretary,

**Project Direction ref: SEPD/ Low Energy Automated Networks / 15 December 2014**

Southern Electric Power Distribution (SEPD) submitted the project *Low Energy Automated Networks (LEAN)* on 25 July 2014 to be considered for funding through the Low Carbon Networks (LCN) Fund. In this year's decision, we selected the project for funding.<sup>1 2</sup>

We have issued this Project Direction to SEPD. It contains the terms to be followed by SEPD as a condition of *LEAN* receiving funding through the LCN Fund. It must comply with these terms, which can be found in the schedule to this Project Direction.

**Project Direction**

Paragraph 3.80 of Section Two of the LCN Fund Governance Document states that a Project Direction will:

- set out the Project-specific conditions that the distribution network operator (DNO) is committing to in accepting Second Tier Funding;<sup>3</sup>
- require the DNO to undertake the Project in accordance with the commitments it has made in the Full Submission.<sup>4</sup> Where appropriate the Project Direction may therefore include extracts from the Full Submission or refer to specific sections of the Full Submission;
- set out the Approved Amount for the Project, as defined in Charge Restriction Conditions (CRC) 13.30, that will form part of the calculation contained in the direction issued by the Authority under CRC13.18 (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.

<sup>1</sup> The terms 'the Authority', 'Ofgem' 'we', 'us' and 'our' are used interchangeably in this letter. The Authority is the Gas and Electricity Markets Authority. Ofgem is the Office of the Authority.

<sup>2</sup> You can find the decision on the fifth year competition [here](#).

<sup>3</sup> Second Tier Funding has the meaning given in CRC13.11.

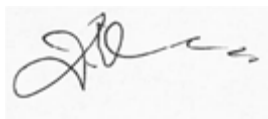
<sup>4</sup> Unless otherwise specified, defined terms (terms in capitals) in this Project Direction are defined in section six of the LCN Fund Governance Document.

These are described for *LEAN* in the schedule to this Project Direction.

### **Decision**

Provided SEPD complies with the LCN Fund Governance Document (as may be modified from time to time in accordance with CRC 13) and with the schedule to this Project Direction, *LEAN* is deemed to be an Eligible LCN Fund Project.<sup>5</sup>

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



**Dora Guzeleva**

Head of Networks Policy, Local Grids

**For and on behalf of the Authority**

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<sup>5</sup> Eligible LCN Fund Project has the meaning given in part G of CRC 13.

## Schedule to Project Direction

### 1. TITLE

Project Direction ref: SEPD/ *Low Energy Automated Networks* / 15 December 2014

### 2. PREAMBLE

This Project Direction issued by the Gas and Electricity Markets Authority (the "Authority") to Southern Electric Power Distribution (SEPD) (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 by the Funding DNO in relation to *Low Energy Automated Networks (LEAN)* (the "Project") as a condition of the Project being funded under the Second Tier and Discretionary Funding Mechanism.<sup>6</sup>

Unless otherwise specified, defined terms in this Project Direction have the meaning given to them in Section Six of the LCN Fund Governance Document version 6.<sup>7</sup>

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

### 3. COMPLIANCE

The Funding DNO must comply with CRC 13 and with the LCN Fund Governance Document (as may be modified from time to time in accordance with CRC 13 and as modified and/or augmented in respect of the Project by this Project Direction) and with the Project Direction.

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 Distribution Service Provider) under the Second Tier Funding Mechanism and under the 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.<sup>8</sup>

Pursuant to paragraph 3.124 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 permission, any funds that have not been spent in line with the approved Project Budget contained within the Project Direction, and any unspent funds on the completion of the Project.<sup>9</sup>

### 4. APPROVED AMOUNT FOR THE PROJECT

The Approved Amount is £2,669,964.11.

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<sup>6</sup> Second Tier and Discretionary Funding Mechanism has the meaning given in CRC 13.3(b).

<sup>7</sup> Unless otherwise stated, all references are to version 6 of the LCN Fund Governance Document.

<sup>8</sup> As defined in the Licence.

<sup>9</sup> Ofgem is the offices of the Gas and Electricity Markets Authority. The terms 'Ofgem' and 'Authority' are used interchangeably in this Project Direction.

## 5. 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 3.98 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 and 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.

## 6. 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 £306,800.00;
- (iii) complete the Project on or before the Project completion date of 31 March 2019; and
- (iv) disseminate the learning from the Project at least to the level described in Section 5 (Knowledge Dissemination).

## 7. DECISION TO CONTINUE TO PHASE TWO

In Appendix 12 of the Full Submission, SEPD states that the decision to continue to phase two will rest with SEPD.

Any decision to continue to phase two must be based on robust evidence that justifies the decision. In line with Appendix 12 of the Full Submission and this year's decision,<sup>10</sup> this evidence must include:

- an updated benefits case for each transformer auto stop start (TASS) option demonstrating a positive net present value for the rollout of each of the three options,
- evidence (including such based on discussions with transformer manufacturers) that a thorough and full review of the risks to transformer health has been undertaken and that mitigations have been identified such that the risks do not outweigh the benefits of the project, and
- written confirmation from the other DNOs that they have been consulted during phase one of the Project and consider that the methodology, and the Project overall, is appropriate to allow them to make an informed decision on the future rollout of the Solution, if the trials prove that the Solution is commercially viable and reasonably practicable. The responses gathered from the DNOs will be used to inform the revised business case identified above.

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<sup>10</sup> You can find the decision on the fifth year competition [here](#).

## 8. REPORTING

Ofgem will issue guidance (as amended from time to time) about the structure and content of the reports required by paragraph 3.98 of Section Two of the LCN Fund Governance Document. The Funding DNO must follow this guidance in preparing the reports required by paragraph 3.98 of Section Two of the LCN Fund Governance Document.

As required by paragraph 3.100 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.

## 9. COST OVERRUNS AND DIRECT BENEFITS

The maximum amount of Discretionary Funding that the Funding DNO can request as additional funding for cost overruns relating to the Project is 0% of the Approved Amount.<sup>11</sup>

The maximum amount of Discretionary Funding that the Funding DNO can request as additional funding for shortfall in direct benefits relating to the Project is 0% of the Approved Amount.<sup>12</sup>

## 10. INTELLECTUAL PROPERTY RIGHTS (IPR)

In Section 5 of its Full Submission (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 and must therefore undertake the Project in accordance with the default IPR arrangements.

## 11. 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 below (that comply with paragraphs 3.27 of Section Two of the LCN Fund Governance Document).<sup>13</sup>

**Table 2. Successful Delivery Reward Criteria**

<p><b>Criterion 9.1 Project setup and review of related projects:</b></p> <ul style="list-style-type: none"><li>Finalise work breakdown structure.</li><li>Review and complete project programme.</li><li>Produce report on GB and international projects related to reduction of losses in distribution networks including recommendations and key suggestions to improve the project design and implementation.</li></ul>	<p><b>Evidence:</b> The final WBS and programme submitted to Ofgem and a report detailing the project recommendations will be delivered by 31 July 2015.</p>
<p><b>Criterion 9.2 Business case validation:</b></p> <ul style="list-style-type: none"><li>Completion of transformer losses testing within relevant environment, to facilitate an in-depth review of the</li></ul>	<p><b>Evidence:</b> A report detailing the work completed to date and an interim version of the losses evaluation tool by 31 March 2016 which considers in detail the predicted costs for each option against the lifetime benefits.</p>

<sup>11</sup> This is the amount requested by the Funding DNO in its Full Submission.

<sup>12</sup> This is the amount requested by the Funding DNO in its Full Submission.

<sup>13</sup> These are the Successful Delivery Reward Criteria set out in the Funding DNOs Full Submission

<p>business case for Transformer Auto Stop Start (TASS) using measured transformer losses figures and specific SEPD network data.</p> <ul style="list-style-type: none"> <li>▪ Confirm or reject the technical validity of each switching method.</li> <li>▪ Present results of phase 1 work packages to complete business case for rollout of each TASS option with ANT if applicable</li> </ul>	
<p><b>Criterion 9.3 Phase 2 decision point:</b></p> <ul style="list-style-type: none"> <li>▪ Internal presentation of results to business representatives.</li> <li>▪ External presentation of results with considered stakeholders including GB DNOs.</li> </ul>	<p><b>Evidence:</b> Written confirmation from external stakeholders that the solution proposed in conjunction with the projected benefits is applicable for GB wide rollout by 4 July 2016. In order to move into Phase 2 of the project, the modelling work must show a positive return on investment and acceptably mitigate the risk to network security and asset health.</p>
<p><b>Criterion 9.4 Initial learning from trial installation and integration:</b></p> <ul style="list-style-type: none"> <li>▪ Installation of appropriate equipment at multiple sites.</li> <li>▪ Appropriate learning captured from the installation and commissioning of equipment on site.</li> <li>▪ Details of the system communications and control functionality.</li> <li>▪ Initial results of the site performance.</li> </ul>	<p><b>Evidence:</b> A report including lessons learnt on all aspects of the integration and subsequent challenges to Ofgem by November 2017.</p>
<p><b>Criterion 9.5 Monitoring &amp; analysis:</b></p> <ul style="list-style-type: none"> <li>▪ In depth review of the techniques used to monitor transformer health</li> <li>▪ Interim feedback on the performance of the implemented sites.</li> <li>▪ Initial assessment of asset health before and after TASS operation.</li> <li>▪ Data to quantify the electrical impact on the network in terms of power quality.</li> </ul>	<p><b>Evidence:</b> An interim report will be provided to Ofgem by 31 March 2018 in conjunction with appropriate evaluation of the various transformer health monitoring techniques employed.</p>
<p><b>Criterion 9.6 Site performance to date:</b></p> <ul style="list-style-type: none"> <li>▪ Full scale review of the site performance in relation to losses.</li> <li>▪ Losses compared with asset health to quantify the actual benefits.</li> <li>▪ Benefits used to quantify the cost of sites operation and hence prove or disprove the business case.</li> </ul>	<p><b>Evidence:</b> A report detailing the operational benefits / challenges of the system to date, by 30 March 2018. In addition site visits will be offered to Ofgem and appropriate stakeholders, internal and external.</p>
<p><b>Criterion 9.7 Network losses evaluation</b></p>	<p><b>Evidence:</b> The tool will be presented to</p>

<p><b>tool:</b></p> <ul style="list-style-type: none"> <li>▪ Completion of a Network Losses Reduction Tool so that DNOs can clearly assess cost benefits analysis of LEAN deployment on specific sites within their networks.</li> <li>▪ Internal SEPD training for network planning engineers and plan for potential integration into 'Business as Usual' practices.</li> </ul>	<p>Ofgem in final format. A standardised SEPD work instruction / technical guide will be published. Both of these outputs will be delivered by December 2018.</p>
<p><b>Criterion 9.8 Knowledge &amp; dissemination:</b></p> <ul style="list-style-type: none"> <li>▪ Project closedown report including 'Network Losses Reduction Tool' analysis.</li> <li>▪ External workshop to present tool and project outcomes.</li> <li>▪ Plan produced to integrate the loss saving techniques into the business for a large scale rollout if applicable.</li> </ul>	<p><b>Evidence:</b> Produce final report and present to Ofgem by 31 March 2019.</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 £306,800.00.

## 12. USE OF LOGO

The Funding DNO and Project Partners, External Funders and Project Supporters 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.<sup>14</sup>

## 13. 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, and the Authority agrees (paragraph 3.100 of Section Two of the LCN Fund Governance Document);and/ 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);and/ 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 3.107 of Section Two of the LCN Fund Governance Document).

## 14. HALTING OF PROJECTS

<sup>14</sup> As listed in Box 1.5 in Section 1 of the Full Submission pro-forma.

This Project Direction is subject to the provisions contained in paragraphs 3.110 to 3.114 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 13.18.

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 Project Direction.

**NOW THEREFORE:**

In accordance with the powers contained in the LCN Fund Governance Document issued pursuant to Part E of CRC 13 (Low Carbon Networks Fund) of the Licence the Authority hereby issues this Project Direction to the Funding DNO in relation to the Project.

This Project Direction constitutes notice of reasons for the Authority's decision pursuant to section 49A of the Electricity Act 1989.



**ANNEX 1: PROJECT BUDGET**

<b>Cost Category</b>	<b>Cost (£k)</b>
<b>Labour</b>	1,197.00
<b>Equipment</b>	544.00
<b>Contractors</b>	722.00
<b>IT</b>	37.00
<b>IPR Costs</b>	-
<b>Travel &amp; Expenses</b>	283.00
<b>Payments to users</b>	-
<b>Contingency</b>	-
<b>Decommissioning</b>	55.00
<b>Other</b>	230.00
<b>Total</b>	<b>3,068.00</b>