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Date: 11 December 2015

Dear Company Secretary,

**Project Direction ref: SHE Transmission / New Suite of Transmission Structures / 11 December 2015**

Scottish Hydro Electric Transmission Plc (SHE Transmission) submitted the project New Suite of Transmission Structures (the Project<sup>1</sup>) on 31 July 2015 to be considered for funding through the Electricity Network Innovation Competition (NIC). In this year's decision<sup>2</sup>, we<sup>3</sup> selected the project for funding.

We have issued this Project Direction to SHE Transmission. It contains the terms to be followed by SHE Transmission as a condition of the Project receiving funding through the Electricity NIC. SHE Transmission must comply with these terms, which can be found in the Schedule to this Project Direction.

**Project direction**

Paragraph 5.66 of the Electricity NIC Governance Document states that a Project Direction will:

- set out the Project-specific conditions that the Network Licensee is committing to in accepting funding;
- require the Network Licensee to undertake the Project in accordance with the commitments it has made in the Full Submission. 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, that will form part of the calculation contained in the Funding Direction issued by the Authority under chapter 7 of the Governance Document;

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<sup>1</sup> Unless otherwise specified, defined terms in this Project Direction have the meaning given to them in Appendix 1 of the [Electricity NIC Governance Document](#).

<sup>2</sup> <https://www.ofgem.gov.uk/publications-and-updates/electricity-network-innovation-competition-2015-funding-decision>.

<sup>3</sup> The terms 'the Authority', 'Ofgem', 'we' and 'us' are used interchangeably in this letter. The Authority is the Gas and Electricity Markets Authority. Ofgem is the Office of the Authority.

- set out the Project budget that the Network Licensee must report against and how variances against the Project budget will be reported and approved; and
- set out the mechanism for the Network Licensee receiving the Approved Amount as set out in the Funding Direction.

These are described for the Project in the Schedule to this Project Direction.

### **Decision**

Provided SHE Transmission complies with the Electricity NIC Governance Document and with the Schedule to this Project Direction, New Suite of Transmission Structures is deemed to be an Eligible NIC Project.<sup>4</sup>

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



**Judith Ross**  
**Head of Network Regulation Policy**  
**For and on behalf of the Authority**

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<sup>4</sup> Eligible NIC Project has the meaning given in definitions of the Electricity Transmission licence.

## Schedule to Project Direction

### 1. TITLE

Project Direction ref: SHE Transmission / New Suite of Transmission Structures / 11 December 2015.

### 2. PREAMBLE

This Project Direction is issued by the Gas and Electricity Markets Authority (the "Authority") to Scottish Hydro Electric Transmission Plc (the "Funding Licensee") pursuant to the Electricity NIC Governance Document issued pursuant to Part E of Special Condition 3I (Network Innovation Competition) of the Electricity Transmission Licence (the "Licence"). It sets out the terms to be followed in relation to New Suite of Transmission Structures (the "Project") as a condition of it being funded under the NIC and the Funding Return Mechanisms.<sup>5</sup>

Unless otherwise specified, defined terms in this Project Direction are defined in Appendix 1 of the Electricity NIC Governance Document.

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

### 3. COMPLIANCE

The Funding Licensee must comply with Special Condition 3I of the Licence and with the Electricity NIC Governance Document (as may be modified from time to time in accordance with Special Condition 3I and as modified and/or augmented in respect of the Project by this Project Direction) and with this Project Direction.

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

Pursuant to Special Condition 3I.8 of the Licence, Disallowed Expenditure is revenue received by the Funding Licensee under the NIC and Funding Mechanism that the Authority determines not to have been spent in accordance with the provisions of the Electricity NIC Governance Document or with those of the relevant Project Direction.

Pursuant to paragraph 8.48 of the Electricity NIC 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 compliance with the approved Project Budget contained within the Project Direction, and any unspent funds on the completion of the Project.

### 4. APPROVED AMOUNT FOR THE PROJECT

The Approved Amount is £6,638,880.67.

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<sup>5</sup> The Funding Return Mechanism is defined in part C of Special Condition 3I.

## **5. PROJECT BUDGET**

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

The Funding Licensee 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 8.17 of the Electricity NIC Governance Document. Ofgem will use the reported expenditure and explanation to assess whether the funding has been spent in accordance with the Electricity NIC 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 Licensee with respect to reporting that are set out in the Electricity NIC Governance Document.

## **6. PROJECT IMPLEMENTATION**

The Funding Licensee must undertake the Project in accordance with the commitments it has made in the Full Submission approved by the Authority pursuant to the Electricity NIC Governance Document and with 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 Network Licensee Compulsory Contribution of £750,062.13;
- (iii) complete the Project on or before the Project completion date of 31 March 2022; and
- (iv) disseminate the learning from the Project at least to the level described in Section 5 (Knowledge Dissemination).

## **7. DECISION TO CONTINUE TO STAGE TWO**

The Funding Licensee has planned two key stages for the Project; the design, development and testing, followed by implementation. After Stage 1: design, development and testing, it has outlined a stage gate where SHE Transmission will review the outputs of Stage 1 and the project's business case. The Funding Licensee must secure consent from the Authority before accessing the funds £5,014,191.67, identified for work on Stage 2 of the Project: implementation, with the exception of such part (up to £189,500) of these funds as is required to meet the Permitted Stage 2 Costs, as defined below.

The Funding Licensee has committed to evaluate the business case of the project at the end of Stage 1. It will assess the learning gathered to ensure that the Project still has a positive business case and will take into account the impacts of any energy policy developments regarding renewable generation.

The Funding Licensee must present this evaluation and recommendation in a report to the Authority by 31 December 2018. Based on the Funding Licensee's application the Authority will, subject to the following paragraph, determine whether the funds for Stage 2, less sums already released in respect of Permitted Stage 2 Costs, will be released. The Authority will notify the Funding Licensee as soon as is practicable and within three months of receiving such report and such information as is referred to in paragraph 4 of Table 1 all to the satisfaction of the Authority .

Prior to the Authority issuing a notification to the Funding Licensee pursuant to the preceding paragraph, the Funding Licensee must not spend any of the funds £5,014,191.67, identified for work on Stage 2 of the Project, other than up to £189,500 on

prototype procurement as part of task 4.3 (the "Permitted Stage 2 Costs"). The Funding Licensee may only spend Permitted Stage 2 Costs if its recommendation to the Authority is to proceed to Stage 2.

If the Authority determines not to release these funds, the unused funds for Stage 2 will be returned to customers, subject to the provisions on Disallowed Expenditure and Halted Project Revenues in the Electricity NIC Governance Document.<sup>6</sup>

## 8. REPORTING

Ofgem will issue guidance (as amended from time to time) about the structure and content of the reports required by paragraph 8.17 of the Electricity NIC Governance Document. The Funding Licensee must follow this guidance in preparing the reports required by paragraph 8.17 of the Electricity NIC Governance Document.

As required by paragraph 8.22 of the Electricity NIC Governance Document, the Funding Licensee 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

The maximum amount of Contingency Funding that the Funding Licensee can request as additional funding for cost overruns on the Project is 5%.<sup>7</sup>

## 10. INTELLECTUAL PROPERTY RIGHTS (IPR)

In Section 5 (Knowledge Dissemination) the Funding Licensee has stated that the Project conforms to the default IPR arrangements set out in Chapter nine of the Electricity NIC Governance Document. The Funding Licensee 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 NIC Successful Delivery Reward against the Successful Delivery Reward Criteria set out in Table 1 below (that comply with paragraphs 5.26 – 5.29 of the Electricity NIC Governance Document).<sup>8</sup>

**Table 1. Successful Delivery Reward Criteria**

| Successful Delivery Reward criterion  | Evidence  |
|---|---|
| <b>1) NeSTS design selection</b>  |   |
| <ul style="list-style-type: none"> <li>The completion of the development of the Support Assessment Matrix. This will be offered to TOs to compare different types of overhead lines supports in a technically balanced manner, incorporating the electrical, mechanical, environmental and construction and operational factors of overhead lines design.</li> <li>Selection of the final support designs.</li> </ul> | <ul style="list-style-type: none"> <li>Publish the initial outputs of the Support Assessment Matrix. An accompanying report will provide the technical details of the selected designs by 30 September 2016.</li> </ul> |
| <b>2) Output of stakeholder engagement</b>  |   |
| <ul style="list-style-type: none"> <li>Implement a programme of stakeholder engagement, supported by a suitable</li> </ul>  | <ul style="list-style-type: none"> <li>Report to the Authority with an assessment on the need for a Customer</li> </ul>   |

<sup>6</sup> Paragraphs 8.48-8.51 of version 2 of the Electricity NIC Governance Document

<sup>7</sup> This is the amount requested by the Funding Licensee in its Full Submission.

<sup>8</sup> These are the Successful Delivery Reward Criteria set out in the Funding Licensees Full Submission.

| <b>Successful Delivery Reward criterion</b>  | <b>Evidence</b>   |
|--|---|
| <p>project supplier. This will include organised events and one to one interviews. Quantitative and qualitative analysis will be provided to understand key priorities. SHE Transmission will factor these viewpoints into the functional specification for NeSTS where practical.</p>   | <p>Engagement Plan and/or data protection strategy by 30 June 2016.</p> <ul style="list-style-type: none"> <li>• Publish a report describing the outputs from stakeholder engagement and demonstrate where these outputs have influenced the NeSTS designs by 30 September 2017.</li> </ul> |
| <b>3) Creation of technical specification</b>  |   |
| <ul style="list-style-type: none"> <li>• The NeSTS overhead lines circuit will be designed in parallel with a traditional overhead lines support design – this is to create contingency in the event that NeSTS is not approved for demonstration at the stage gate process. The new technical specification for the supports will show how NeSTS design can be practically applied on a project, and is a key learning output for TOs and the supply chain. This will inform the procurement exercises for the initial deployment.</li> </ul>                         | <ul style="list-style-type: none"> <li>• Publish a report on the outputs of the technical specifications of the NeSTS design stage by 30 August 2018.</li> </ul>  |
| <b>4) Decision Point / Review of business case</b>   |   |
| <ul style="list-style-type: none"> <li>• Review the NeSTS business case to conclude whether or not the Project should continue to Phase 2.</li> <li>• The learning gathered at this point will be assessed to ensure that NeSTS still has a positive business case – impacts of any energy policy developments regarding renewable generation and the results of stakeholder engagement will be considered as part of the decision process.</li> <li>• It will involve SHE Transmission’s Director of Transmission and the SHE Transmission Steering Board.</li> </ul> | <ul style="list-style-type: none"> <li>• Submit an update to Section 3 and Appendix 6, the business case of the Full Submission, to the Authority evaluating the project and recommending whether or not to proceed to Phase 2 by 31 December 2018.</li> </ul>                              |
| <b>5) Type Testing Agreement</b>   |   |
| <ul style="list-style-type: none"> <li>• Within the first stage of Phase 2 (the demonstration part of the project), the detailed designs will enable the construction of a NeSTS overhead lines support structure, which will be tested at a dedicated testing facility.</li> <li>• This is crucial in ensuring the design is supply chain ready and acceptable to other TOs.</li> </ul>   | <ul style="list-style-type: none"> <li>• A signed agreement with a dedicated testing facility by 30 September 2019.</li> </ul>  |
| <b>6) Completion of type testing</b>   |   |
| <ul style="list-style-type: none"> <li>• The overhead lines support will be put through a series of tests in order to ensure that it complies with the relevant standards and specifications including BS EN 60652 and BS EN 61773.</li> <li>• The completed test results will provide clear analysis regarding NeSTS’s capabilities.</li> </ul>   | <ul style="list-style-type: none"> <li>• Publish a report on the outputs of the type testing conclusions by 20 February 2020.</li> </ul>  |

| <b>Successful Delivery Reward criterion</b>  | <b>Evidence</b>   |
|--|---|
| <b>7) Energisation of NeSTS Overhead lines</b>   |   |
| <ul style="list-style-type: none"> <li>The energisation of the NeSTS overhead lines circuit is the culmination of the construction and commissioning of a section of the project is a key milestone.</li> </ul>  | <ul style="list-style-type: none"> <li>Publish a full report detailing outputs and knowledge capture including an evaluation comparing NeSTS construction, commissioning and energisation with that of a typical steel lattice tower project by 29 January 2021.</li> </ul> |
| <b>8) Publication of e-learning and visualisation tools and project closedown report</b>   |   |
| <ul style="list-style-type: none"> <li>Knowledge capture and dissemination is of high importance to the project and the acceleration of NeSTS into TOs' business as usual activities. SHE Transmission will develop an e-learning module to assist with training and familiarisation activities amongst TOs and the supply chain.</li> <li>A visualisation tool will also be created to assist TOs with network planning, and to share learning with stakeholders.</li> <li>At the end of the project, full evaluation and key learning points will be considered for inclusion in a comprehensive project closedown process. This will include learning gathered from knowledge events and the progress of the MASC substation during operation.</li> </ul> | <ul style="list-style-type: none"> <li>Complete development of both tools and share with TOs and deliver detailed closedown report to Ofgem by 31 March 2022.</li> </ul>  |

The maximum amount of the NIC Successful Delivery Reward (which will not exceed the Licensee Compulsory Contribution) that the Project will be eligible for is £750,062.13.

## **12. USE OF LOGO**

The Funding Licensee and Project Partners, External Funders and Project Supporters may use the NIC logo for purposes associated with the Project but not use the Ofgem or Ofgem E-Serve logos in any circumstances.<sup>9</sup>

## **13. AMENDMENT OR REVOCATION**

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

- (i) if the Funding Licensee considers that there has been a material change in circumstance that requires a change to the Project Direction, and the Authority agrees (paragraph 8.23 of the Electricity NIC Governance Document); or
- (ii) if Ofgem agrees to provide Contingency Funding, which requires the re-issue of the Project Direction (paragraph 8.42 of the Electricity NIC Governance Document); or
- (iii) if the Funding Licensee applies for Contingency 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 8.42 of the Electricity NIC Governance Document).

<sup>9</sup> As listed in Box 1.6 in Section 1 of the Full Submission pro-forma.

## **14. HALTING OF PROJECTS**

This Project Direction is subject to the provisions contained in paragraphs 8.30 to 8.34 of the Electricity NIC 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 Special Condition 3I.

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 Licensee clarifying the effect of that halting decision as regards the status and legal force of the conditions contained in this Direction.

### **NOW THEREFORE:**

In accordance with the powers contained in the Electricity NIC Governance Document issued pursuant to Part E of Special Condition 3I of the Licence the Authority hereby issues this Project Direction to the Funding Licensee in relation to the Project.

This constitutes notice of reasons for the Authority's decision pursuant to section 49A (Reasons for decisions) of the Electricity Act 1989.



## ANNEX 1: PROJECT BUDGET

| <b>Cost Category</b>         | <b>Cost (£)</b>     |
|------------------------------|---------------------|
| <b>Labour</b>                | 1,645,486.36        |
|                              |                     |
| <b>Equipment</b>             | 258,564.96          |
|                              |                     |
| <b>Contractors</b>           | 5,344,341.00        |
|                              |                     |
| <b>IT</b>                    | 204,792.00          |
|                              |                     |
| <b>IPR Costs</b>             | -                   |
|                              |                     |
| <b>Travel &amp; Expenses</b> | 47,437.00           |
|                              |                     |
| <b>Payments to users</b>     | -                   |
|                              |                     |
| <b>Contingency</b>           | -                   |
|                              |                     |
| <b>Decommissioning</b>       | -                   |
|                              |                     |
| <b>Other</b>                 | -                   |
|                              |                     |
| <b>Total</b>                 | <b>7,500,621.32</b> |