



Making a positive difference
for energy consumers

Company Secretary
Scottish Hydro Electric Transmission Ltd
Inveralmond House
200 Dunkeld Road
Perth
PH1 3AQ
UK

Direct Dial: 020 7901 7159
Email: andrew.burgess@ofgem.gov.uk

Date: 19 December 2014

Dear Company Secretary,

Project Direction ref: SHETL / Modular Approach to Substation Construction / 19 December 2014

Scottish Hydro Electric Transmission Plc (SHETL) submitted the project Modular Approach to Substation Construction (the Project¹) on 25 July 2014 to be considered for funding through the Electricity Network Innovation Competition (NIC). In this year's decision², we³ selected the project for funding.

We have issued this Project Direction to SHETL. It contains the terms to be followed by SHETL as a condition of the Project receiving funding through the Electricity NIC. It 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;
- 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

¹ Unless otherwise specified, defined terms in this Project Direction have the meaning given to them in Appendix 1 of the Electricity NIC Governance Document.

² [Decision on the second year Electricity Network Innovation Competition.](#)

³ 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.

- the mechanism for the Network Licensee receiving the Approved Amount is set out in the Funding Direction.

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

Decision

Provided SHETL complies with the Electricity NIC Governance Document and with the schedule to this Project Direction, MASC is deemed to be an Eligible NIC Project⁴.

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

Yours faithfully,



Andrew Burgess
Associate Partner, Transmission and Distribution Policy
For and on behalf of the Authority

⁴ Eligible NIC Project has the meaning given in definitions of the Electricity Transmission licence.

Schedule to Project Direction

1. TITLE

Project Direction ref: SHETL / Modular Approach to Substation Construction / 19 December 2014

2. PREAMBLE

This Project Direction 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") sets out the terms to be followed in relation to Modular Approach to Substation Construction (the "Project") as a condition of it being funded under the NIC and the Funding Return Mechanisms¹.

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 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 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 (whether by the Funding Licensee or by another Licensee) under the NIC and Funding Return Mechanisms 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's² 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 Amounts is £2,835,044.02.

¹ The Funding Return Mechanism is defined in part C of Special Condition 3I.

² Ofgem is the Office of the Gas and Electricity Markets Authority. The terms 'Ofgem' and 'Authority', 'we' and 'us' are used interchangeably in this Project Direction.

5. PROJECT BUDGET

The Project Budget is set out in Annex 1. The Funding Licensee must not spend more than 110% of any category total (e.g. "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 or 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 £326,282.90;
- (iii) complete the Project on or before the Project completion date of 28 June 2019; and
- (iv) disseminate the learning from the Project at least to the level described in Section 5 (Knowledge Dissemination).

7. 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.

8. COST OVERRUNS

The maximum amount of Discretionary Funding that the Funding Licensee can request as additional funding for cost overruns on the Project is 0%³.

9. INTELLECTUAL PROPERTY RIGHTS (IPR)

In Section 5 (Knowledge Dissemination) the Funding Licensee has stated that the Project does conform to the default IPR arrangements set out in Section Five of the Electricity NIC Governance Document and must therefore undertake the Project in accordance with the default IPR arrangements.

³ This is the amount requested by the Funding Licensee in its Full Submission.

10. 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 3⁴ below (that comply with paragraphs 5.26 – 5.29 of the Electricity NIC Governance Document).

Table 3. Successful Delivery Reward Criteria

Successful Delivery Reward criterion	Evidence
<p>Stakeholder engagement A key milestone of MASC’s success involves the outputs of engagement with key stakeholder groups, including:</p> <ul style="list-style-type: none"> ▪ internal contact with SHE Transmission business areas; ▪ external contact with other transmission and distribution Licence holders; ▪ external dialogue with manufacturer and broader supply chain; and ▪ external stakeholders such planning and other statutory bodies. <p>Work undertaken within this criterion will also seek to inform the development of the technical and functional aspects of the MASC substation.</p>	<p>A report detailing the outputs from stakeholder engagement activities and their impact on MASC’s functional specification requirements will be published by 30th July 2015.</p>
<p>MASC substation detailed design The publication of the final, functional requirement document for the MASC project will require the identification of new equipment and associated requirements of operation and maintenance. The NIC funding will also support evaluation of new civil engineering practices and advances in aesthetics and environment that could factor into the final functional specification.</p>	<p>A report will be published by 15th January 2016. This will contain identification of the key innovations that have been incorporated into the final technical specification.</p>
<p>Knowledge capture from off-site construction At this stage, MASC components will be manufactured and tested in a factory environment. This stage offers invaluable opportunities to evaluate individual components, protection and control systems. Comparison between MASC off-site construction and commission testing (in a clean, controlled environment) with conventional on-site construction processes will be collated.</p>	<p>Written analysis of the progress towards complete system testing achieved during the factory stage and identification of cost savings will be completed by 31st of October 2016.</p>
<p>Knowledge capture from on-site installation At this stage, the substation will be transported to site, with essential on-site construction completed. Key learning from this stage will validate outputs from stakeholder engagement.</p>	<p>The MASC project team will produce an analysis document which provides a clear assessment of the benefits of the project’s approach in comparison to conventional methodology in installation of an air-insulated substation, by 30th June 2017.</p>

⁴ These are the Successful Delivery Reward Criteria set out in the Funding Licensees Full Submission

<p>Analysis of MASC on-site commission and energisation</p> <p>NIC funding will be used where appropriate to deliver validatory on-site re-testing and commissioning when the substation is installed and energised. Verification of on-site commissioning and energisation will also take place. This will be compared with the outputs from the factory commissioning tests.</p>	<p>A full report detailing the outputs and knowledge capture will be published by 29th September 2017. This will include learning on the substation's behaviour during, and following, energisation.</p>
<p>Operational Learning</p> <p>The MASC solution is anticipated to challenge current operational and maintenance practices. Knowledge captured throughout a period of MASC operation will inform and validate key operational and maintenance theories.</p>	<p>The MASC project team will publish a paper which summarises ways in which MASC solution elements challenge present day procedures. This paper will include mitigations against said challenges and highlight possible improvements. While the initial document will be available by 30 June 2018, this paper may be modified if new information is deemed relevant.</p>
<p>MASC Performance Monitoring and Evaluation</p> <p>Monitoring will be ongoing throughout the project's lifecycle. At this stage, valuable knowledge concerned with factory, transportation, installation, and operational monitoring will be collated.</p>	<p>A summary report of the monitoring undertaken and the recommendations drawn out from analysis will be published by 18th of December 2018.</p>
<p>Project Closedown Report</p> <p>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. This will also include details of the safety, operational and maintenance procedures developed for MASC through engagement with all other transmission and distribution licensees.</p>	<p>A detailed closedown report will be delivered by the 28th June 2019.</p>

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 £326,282.90.

11. USE OF LOGO

The Funding Licensee and Project Partners, External Funders and Project Supporters⁵ may use the NIC logo for purposes associated with the Project but not use the Ofgem or Ofgem E-Serve logos in any circumstances.

12. 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 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 8.42 of the Electricity NIC Governance Document).

13. 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 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.

⁵ As listed in Box 1.6 in Section 1 of the Full Submission pro-forma.

ANNEX 1: PROJECT BUDGET

Cost Category	Cost (£)
Labour	
	1,373,514.31
Equipment	
	891,571.16
Contractors	
	617,003.20
IT	
	244,661.50
IPR Costs	
	-
Travel & Expenses	
	136,078.85
Payments to users	
	-
Contingency	
	-
Decommissioning	
	-
Other	
	-
Total	3,262,829.02