

## **Scottish Hydro Electric Transmission Ltd.**

### **NIC ISP : MASC - Modular Approach to Substation Construction 14 April 2012**

**Question 1. In the pro-forma, under the innovative section, you state that "This new range of modular and containerised equipment has been implemented in many other parts of the world but has not to date been tested or fully utilised in an integrated way on the GB network". Can you clarify whether the modular equipment has been fully utilised in an integrated way anywhere else in the world?**

#### **Answer**

There are a number of locations where modular solutions have been deployed throughout the world, there are a few cases where all aspects of substation design have been modularised in an integrated way. More typically single components are modularised and placed into a more conventional substation layout. This project aims to take the best of these modular approaches and push the benefits further by adopting new construction techniques, protection systems, communications and auxiliary services. It also aims to challenge the historical standards which drive a traditional design and build industry confidence in this new smarter approach.

**Question 2. As you know, under the 'Project Partners and external resourcing/funding' criterion, you are required to provide evidence of the processes that have been followed and the rationale for selecting BOTH (i) participants and (ii) ideas for the project.**

#### **Answer**

Throughout our business we are in regular consultation with a range of stakeholders, both in formal engagement sessions and more informal dialogues; during this process we meet many of the potential participants and identify new innovative ideas and approaches. In addition we have a number of specific organisation and mechanisms that allow us to capture potential partners and ideas. These include:

- Energy Innovation Centre (EIC focussing on SME and independent innovators);
- ENA LCN Fund Industry Collaboration Platform;
- Academic partnerships;
- Bilateral Stakeholder engagement with Vendors;
- Attendance at a range of conferences and other networking events;
- Stakeholder engagement more broadly across our customer base;
- Internal innovation generating workshops and initiatives; and
- Our existing IFI programme partners and ideas.

Through these mechanisms we record potential innovative ideas and associated partners for either participation or delivery.

In preparation for our ISP submission we hold selection events where a range of business experts assist in the evaluation of the ideas that have emerged from engagement or have reached a suitable TRL in our historic IFI and NIA programme. In this workshop we consider factors such as:

- Business needs and gap analysis;
- Existence of duplication with previous projects;

- Size and value of the project necessary to demonstrate (NIA or NIC);
- Applicability of the idea to the NIC criteria;
- Timeliness of the solution in relation to the challenges the industry and our stakeholders face;
- Replicability and relevance of the solution across the UK;
- Technical readiness; and
- Value and benefits assessment.

We utilise the output of these workshops to present a short-list to our Innovations Steering Board (ISB) from which our strongest bids are put forward for submission to the NIC.