

24 August 2011

Anna Rossington  
Distribution Policy  
Ofgem  
9 Millbank  
London  
SW1P 3GE

**Ref 100/11 – Shetland Northern Isles New Energy Solutions (NINES) Project Consultation**

Dear Anna,

Smarter Grid Solutions Ltd (SGS) welcomes the opportunity to respond to Ofgem's consultation on the proposed Shetland NINES project.

SGS provides a range of products, software applications (related to Active Network Management (ANM)) and consultancy services to design and deliver smart grid solutions that help electricity network operators with the challenges associated with grid connections and the changing profiles of demand and generation. These solutions allow grid operators to avoid or defer capital intensive network upgrades while providing more cost effective and faster grid connections for new customers, improving network utilisation, extending network visibility and ultimately reducing customer bills.

SGS has been working with Scottish Hydro Electric Power Distribution (SHEPD) since May 2010 to develop the technical concept behind the NINES project, to study the existing Shetland electricity network, to evaluate the technical limitations of the proposed controllable elements within the project and to prepare the requirements for the ANM applications at the centre of the project. In collaboration with SGS, SHEPD has also implemented a number of projects that have proven various aspects of the overall NINES solution, including:

- A six home domestic demand side management trial to prove the concept of controlling domestic heat storage
- A large scale energy storage trial to prove the ability to interface and control a 1 MW, 6 MWh Sodium Sulphur battery
- The Orkney smart grid to prove the ability to interface and control distributed generation to actively manage constraints on the power system

The implementation of these projects has significantly reduced the technological risk associated with a number of the key components that make up the overall NINES solution.



In Chapter Three of the consultation Ofgem has asked respondents to consider four specific questions; the SGS response to these questions is provided below.

**Question 1. Do you agree that NINES can potentially reduce the cost of ensuring a secure, environmentally compliant electricity supply compared with the option of replacing LPS with a like-for-like power station?**

Yes, SGS agrees that the NINES project has the potential to reduce the cost of ensuring a secure and environmentally compliant electricity supply compared with the option of replacing Lerwick Power Station with a like-for-like power station. Moreover, the objective of the NINES project is to deliver a greater proportion of the energy mix from for renewable energy sources, supporting other government objectives such as the implementation of the Low Carbon Transition Plan. Bringing forward non-network solutions, such as the proposed NINES project, is an important step in establishing Smart Grid solutions as alternatives to conventional reinforcement approaches. This is entirely in line with the objectives of RIIO regulation and clearly demonstrates SHEPD embracing innovation in order to deliver the desired outputs of additional renewable generation, reduced costs and engagement with local customers.

**Question 2. Do you agree with our proposal to change SHEPD's licence to enable the NINES proposal to be submitted as a part of the Integrated Plan?**

Yes, SGS believes that this is an effective method of ensuring that the NINES project fulfils the overall objectives of reducing cost and integrating further renewable energy sources. Including the NINES project within the Integrated Plan will permit the results of the first phase of the NINES project to be fully considered in the final decision on how to develop a long term solution for Lerwick Power Station. Extending the date for submission of the Integrated Plan from 31 January 2013 to 31 June 2013 will help ensure that sufficient aspects of the NINES project can be delivered, and the relevant learning extracted, to allow a more informed decision regarding the technical and economic trade-offs between different options. SGS believes that this is an effective means of risk mitigation. SGS believes that the amendment of SHEPD's license (CRC18A) to enable the funding of the NINES project as part of the Integrated Plan is therefore an appropriate measure.

**Question 3. Do you agree with our proposal to finance NINES using a totex approach and to classify it as Integrated Plan Costs?**

Yes, SGS believes a total expenditure approach with costs being recovered as already set out in SHEPD's license for the implementation of the Integrated Plan is an appropriate cost recovery model for this project. Classifying the costs within the Integrated Plan will help ensure that the costs are clearly linked to the delivery of the Integrated Plan, the enduring nature of the solution is recognised and the impact on customer bills in a single year is minimised.

**Question 4. Do you agree that the risks to the project have been mitigated, and that the potential benefits from the project outweigh the risks?**

SGS agrees with the description of the risks in 3.19 of the consultation in that the individual technologies to be deployed within NINES have all previously been deployed elsewhere. However, the integration of all of these technologies as part of a single integrated solution is new and carries a degree of technological risk.

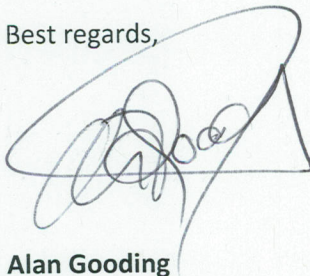


As described in the opening section of this letter SGS has worked with SHEPD on a number of projects and trials that have already proven various aspects of the NINES project, including two trials on Shetland itself. This has provided valuable learning that is already being applied to the project in order to mitigate the technological risk.

The proposed funding mechanism and output measures approach will help to ensure SHEPD are sufficiently motivated to deliver a successful outcome. Therefore given the clear benefits of the NINES project and given the processes in place to mitigate the project risks SGS believe that the benefits outweigh the risks and the project should go ahead.

In conclusion, SGS believe that the NINES project will deliver a more cost effective and lower carbon solution than the replacement of Lerwick Power Station on a like-for-like basis.

Best regards,

A handwritten signature in black ink, appearing to read 'Alan Gooding', enclosed within a large, loopy, oval-shaped flourish.

**Alan Gooding**

**Managing Director**