Notes on Completion: Please refer to the appropriate NIA Governance Document to assist in the completion of this form. The full completed submission should not exceed 6 pages in total.

NIA Project Registration and PEA Document

Date of Submission

Jan 2013

Project Reference Number

SSET1007

Project Registration

Project Title

Orkney Energy Storage Park (Phase 1)

Project Reference Number

SSET1007

Project Licensee(s)

Scottish and Southern Electricity Networks Distribution

Project Start

June 2012

Project Duration

2 years and 10 months

Nominated Project Contact(s)

SSEN Future Networks Team

Project Budget

£175,000.00

Summary

An RPZ has been established on Orkney using Active Network Management technology to facilitate the connection of new renewable generation on to a constrained 33kV network. cottish and Southern Energy Power Distribution has experience of operating a 100kW Zinc Bromide flow battery and is installing a 1MW Sodium Sulphur NAS battery

In contrast to Scottish and Southern Energy Power Distribution's existing energy storage installations, this project is aimed principally at demonstrating that it is possible for a DNO to create commercial incentives and infrastructure to encourage third party Energy Storage Providers (ESP) to locate their storage in areas where it can be used to alleviate network constraints. These commercial arrangements will benefit Energy Storage Systems (ESS) owners/operators who provide systems that exhibit charging/discharging characteristics that are tuned to that particular network constraint.

This Tier 1 project will create the commercial contracts neccesary to incentivise the 3rd party ESPs, prepare a tender process that will select the most suitable 3rd party ESP, design the installation for up to 2ESSs outside Kirkwall Power Station (KPS) and select up to the 2 most suitable ESPs that fullfill the success criteria.

If two suitable ESPs are selected, then a follow on Tier 1 Project will be registered that will construct the connection points and trial the commercial arrangements. However if no suitable ESPs are identified from the bidding process then the follow on Tier 1 Project will not be registered.

Nominated Contact Email Address(es)

fnp.pmo@sse.com

Problem Being Solved

Method(s)

Scope

Objective(s)

The project has the following objectives objectives:

- Create commercial contracts that will incentivise 3rd Party ESPs to locate on a constrained distribution network
- Prepare a tender process that will ensure that the ESPs selected will fulfil the success criteria
- Design up to 2 connection points for ESSs outside KPS
- Award up to two ESPs.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

n/a

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

n/a

Geographical Area

Revenue Allowed for the RIIO Settlement

Indicative Total NIA Project Expenditure

Project Eligibility Assessment Part 1

There are slightly differing requirements for RIIO-1 and RIIO-2 NIA projects. This is noted in each case, with the requirement numbers listed for both where they differ (shown as RIIO-2 / RIIO-1).

Requirement 1

Facilitate the energy system transition and/or benefit consumers in vulnerable situations (Please complete sections 3.1.1 and 3.1.2 for RIIO-2 projects only)

Please answer **at least one** of the following:

How the Project has the potential to facilitate the energy system transition:

n/a

How the Project has potential to benefit consumer in vulnerable situations:

n/a

Requirement 2 / 2b

Has the potential to deliver net benefits to consumers

Project must have the potential to deliver a Solution that delivers a net benefit to consumers of the Gas Transporter and/or Electricity Transmission or Electricity Distribution licensee, as the context requires. This could include delivering a Solution at a lower cost than the most efficient Method currently in use on the GB Gas Transportation System, the Gas Transporter's and/or Electricity Transmission or Electricity Distribution licensee's network, or wider benefits, such as social or environmental.

Please provide an estimate of the saving if the Problem is solved (RIIO-1 projects only)

n/a

Please provide a calculation of the expected benefits the Solution

n/a

Please provide an estimate of how replicable the Method is across GB

n/a

Please provide an outline of the costs of rolling out the Method across GB.

n/a

Requirement 3 / 1

Involve Research, Development or Demonstration

A RIIO-1 NIA Project must have the potential to have a Direct Impact on a Network Licensee's network or the operations of the System Operator and involve the Research, Development, or Demonstration of at least one of the following (please tick which applies):

☐ A specific piece of new (i.e. unproven in GB, or where a method has been trialled outside GB the Network Licensee must justify repeating it as part of a project) equipment (including control and communications system software).

☐ A specific novel arrangement or application of existing licensee equipment (including control and/or communications systems and/or software)

☐ A specific novel operational practice directly related to the operation of the Network Licensees system

☐ A specific novel commercial arrangement

RIIO-2 Projects

☐ A specific piece of new equipment (including monitoring, control and communications systems and software)

☐ A specific piece of new technology (including analysis and modelling systems or software), in relation to which the Method is

unproven

☐ A new methodology (including the identification of specific new procedures or techniques used to identify, select, process, and analyse information)

☐ A specific novel arrangement or application of existing gas transportation, electricity transmission or electricity distribution equipment, technology or methodology

☐ A specific novel operational practice directly related to the operation of the GB Gas Transportation System, electricity transmission or electricity distribution

☐ A specific novel commercial arrangement

Specific Requirements 4 / 2a

Please explain how the learning that will be generated could be used by the relevant Network Licensees

n/a

Or, please describe what specific challenge identified in the Network Licensee's innovation strategy that is being addressed by the project (RIIO-1 only)

n/a

☐ Has the Potential to Develop Learning That Can be Applied by all Relevant Network Licensees

Is the default IPR position being applied?

☐ Yes

Please demonstrate how the learning from the project can be successfully disseminated to Network Licensees and other interested parties.

Please describe how many potential constraints or costs caused, or resulting from the imposed IPR arrangements.<

Please justify why the proposed IPR arrangements provide value for money for customers.

Project Eligibility Assessment Part 2

Not lead to unnecessary duplication

A Project must not lead to unnecessary duplication of any other Project, including but not limited to IFI, LCNF, NIA, NIC or SIF projects already registered, being carried out or completed.

Please demonstrate below that no unnecessary duplication will occur as a result of the Project.

n/a

If applicable, justify why you are undertaking a Project similar to those being carried out by any other Network Licensees.

n/a

Additional Governance And Document Upload

Please identify why the project is innovative and has not been tried before

n/a

Relevant Foreground IPR

n/a

Data Access Details

n/a

Please identify why the Network Licensees will not fund the project as apart of it's business and usual activities

n/a

Please identify why the project can only be undertaken with the support of the NIA, including reference to the specific risks(e.g. commercial, technical, operational or regulatory) associated with the project

n/a

This project has been approved by a senior member of staff

☑ Yes