

NIA Project Registration and PEA Document

Date of Submission

May 2012

Project Reference Number

WPDT1002

Project Registration

Project Title

Network Management on the Isles of Scilly

Project Reference Number

WPDT1002

Project Licensee(s)

National Grid Electricity Distribution

Project Start

August 2012

Project Duration

1 year and 1 month

Nominated Project Contact(s)

WPD Future Networks Team (01332 827446)

Project Budget

£1,287,000.00

Summary

Electricity supplies to the Isles of Scilly comprise a single 33kV undersea cable from the mainland supplemented by an island based diesel generating station. There are also remote, locally controlled generators on two outer islands available for use in limited instances.

The islands provide an effective self contained microcosm of an 11kV and Low Voltage (LV) electricity distribution system that can be monitored and controlled to provide measurement of impact and capability to accommodate Distributed Generation (DG) and other low carbon initiatives.

The Isles of Scilly Council has a published goal of the islands being energy self sufficient To this end, the council is examining methods of localised generation such as waste disposal and the islanders themselves are keen to exploit PV and wave power on and off the smaller islands. Western Power Distribution will work in conjunction with the islanders through this initiative to ensure the full support for their desire to be energy self sufficient. The community level interest in energy management was demonstrated in their 2009 'e-day' initiative which received national BBC TV coverage.

Problem Being Solved

Method(s)

Scope

Objective(s)

It is proposed to establish real time monitoring on all of the distribution substations on the Isles of Scilly in such a way that the use of the generation facilities on the islands can be maximised to secure supplies to the islands. The control and management of the generation on the islands will be affected using new methods that have not been used in Western Power Distribution before.

The monitoring at the substations will be supplemented by controls where appropriate to ensure that islander's and company initiatives associated with localised generation can be accommodated and managed in an effective way. The initial localised generation is

expected to be by PV though the islander’s themselves are actively pursuing wave power and possibly waste disposal as other sources of generation. The Scillies have the highest PV solar efficiency rating in the UK and present a challenging DG demand environment on a weakly connected rural network.

The initiative will support the council’s published goal of energy self sufficiency.

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