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

Sep 2014

Project Reference Number

NIA_NGN_081

Project Registration

Project Title

Provision of Temporary Gas Supplies

Project Reference Number

NIA_NGN_081

Project Licensee(s)

Northern Gas Networks

Project Start

July 2014

Project Duration

3 years and 6 months

Nominated Project Contact(s)

Matthew McBride (NGN), Neil Russell, Andy Newton (National Grid Gas Distribution)

Project Budget

£166,500.00

Summary

The project has been split into three main stages, some of which may be possible to consider concurrently, but it was agreed that without a suitable legal, regulatory and commercial regime, the technical investigation should not proceed.

Stage 1: to undertake a research project on the legal, regulatory and commercial issues restricting networks supplying small quantities of gas during its operations. Investigate if changes can be accommodated within the change to existing restrictions.

Stage 2: to undertake a due diligence investigation on safety requirements involved in networks temporarily supplying small number of consumers with bottled gas

Stage 3: to develop a technical solution that meets the regulatory, commercial and safety restrictions

Third Party Collaborators

Gemserv

GL DNV

Xoserve Ltd

Nominated Contact Email Address(es)

innovation@northerngas.co.uk

Problem Being Solved

It is acknowledged that vulnerable customers may be considered at risk due to lack of gas supplies when there is either a planned

interruption or as a result of emergency activities. GDNs have obligations to provide alternative heating and cooking in such circumstances and this in itself may cause the electricity network to be placed at risk due to significant additional, and unexpected load being placed on it when the alternative heating and cooking provided is electric fan heaters and hotplates.

The process of providing such alternatives may be hampered by difficulty in obtaining suitable supplies of alternative equipment, especially where it is as a result of a localised emergency. Where work is as a result of planned interruption, this may only be required in limited circumstances as work is often carried out when people are at work. For pensioners or people with young families, alternatives during the day may be essential, but can be managed more easily than in an emergency situation.

In both cases, where there has been a need to isolate properties on a temporary basis to carry out work, all supplies must be purged and relit to meet safety standards. This work can be disruptive to customers and is a source of frequent complaints.

Maintaining supply to individual properties or a number of properties from a temporary stored source has some significant regulatory & commercial framework, safety standards and technical issues. As gas transporters are not allowed under their licence arrangements to supply gas through a customer's meter. RIIO has resulted in a changing mind-set regarding the impact gas supply isolation has a small but significant number of customers. Networks need to be consider fully all aspects of supplying customers using bottled gas as a temporary substitute for mains gas to develop an acceptable solution.

Method(s)

Via a competitive process managed by ENA, the gas networks will all research both the Regulatory, Commercial, Technical and Safety aspects of this area to determine what is possible.

This project will initially undertake a significant amount of research in into the Commercial aspects, alongside Xoserve supporting the project. Investigation will take place around any primary, secondary or licence conditions that may prevent the technical solution.

The networks also wish to engage in a technical research organisation to review safety and control management issues with any desired outputs.

Finally the third stage, which will be significantly affected by the initial research work, will be the development of the technical solution to a bench top stage.

Production of a comprehensive report on Legal, Regulatory and Commercial guiding the networks to optioneering future stages.

Scope

The project has been split into three main stages, some of which may be possible to consider concurrently, but it was agreed that without a suitable legal, regulatory and commercial regime, the technical investigation should not proceed.

Stage 1: to undertake a research project on the legal, regulatory and commercial issues restricting networks supplying small quantities of gas during its operations. Investigate if changes can be accommodated within the change to existing restrictions.

Stage 2: to undertake a due diligence investigation on safety requirements involved in networks temporarily supplying small number of consumers with bottled gas

Stage 3: to develop a technical solution that meets the regulatory, commercial and safety restrictions

Objective(s)

This proposed innovation project is intended enable provision of temporary gas supplies to alleviate localised interruption. The project is being proposed as part of the RIIO Innovation arrangements and will be an all networks project, led by NGN as proposer.

Three main objectives have been identified initially for the project:-

1. Changes to Uniform Network Code, GT Licence and/or commercial arrangements that would allow networks to supply small numbers of customers without the current restrictions,
2. Robust safety management procedures and processes that ensure any technical solution places no additional risk to customers or the network, and
3. A technical solution that uses gas to supply existing appliances and minimizes the need for purge and relight.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

- A workable legal and commercial framework that would allow networks to supply gas through existing metering arrangements,
- A safety management procedure that all networks could adopt that would safely maintain customers gas appliances for a minimum time period during an emergency and planned disruptions, and
- A cost effective method of providing a temporary gas supply to customers with minimal disruption.

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

The funding is over a number of stages which will focus initially on the Legal, Regulatory and Commercial aspects. If these cannot be overcome the cost of the project will be minimised but our operations will learn a great deal of how the networks are funded.

If the initial stage shows signs of success it will only be then when the second technical stage will commence.

The third stage at this moment is very much less defined as it will only develop a solution that meets both the initial stages. The detail of this part of the project has not been fully evaluated therefore, should the first two stages proves successful a fully costed stage will be drafted into here.

Technology Readiness at Start

TRL4 Bench Scale Research

Technology Readiness at End

TRL7 Inactive Commissioning

Geographical Area

Initial stages research only.

Revenue Allowed for the RIIO Settlement

None

Indicative Total NIA Project Expenditure

Northern Gas Networks £35,000.00
National Grid Gas Distribution £90,000.00
Sub Total £125,000.00

Internal Spend £41,500

Total £165,500

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)

Has the potential to save on significant issues around customer complaints, dealing with vulnerable customers and reducing the time spent off gas?

The savings will be very dependent on the technical solution identified as part of the research.

Please provide a calculation of the expected benefits the Solution

Research Project

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

All networks have collaborated in the prerparation for this project with NGN & NGGD working together to fund. All networks are aware of the potential benefits on this project and are committed to delivering a better service to their customers.

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

Research

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

There are some significant fundamental questions that this project is attempting to answer:
Can it be done in Legal and Regulatory arena, investigating if licence changes or primary legislation changes are needed?

Can it be done commercially? Dealing with Xoserve and the suppliers on commercial impact of undertaking this work and investigating alternative solutions

Can it be undertaken safely? What are the technical restrictions that currently exist and how can these be mitigated. Working with the HSE on safe technical solutions

Aim would be to complete a feasibility study on a number of solutions to provide technical guidance on a range of solutions. These studies will provide significant learning for implementation.

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

It is currently unclear as to whether the networks licence or operational procedures would allow this solution to take place. If successful it will have a major impact on some of our most vulnerable customers during times of disruption and reduce the level of dissatisfaction networks encounter due to isolation of supplies.

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

Is the default IPR position being applied?

☑ Yes

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