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 2013

Project Reference Number

NIA_NGN_040

Project Registration

Project Title

Research into sustainable energy and relieving fuel poverty in Multi Storey Buildings

Project Reference Number

NIA_NGN_040

Project Licensee(s)

Northern Gas Networks

Project Start

January 2013

Project Duration

0 years and 7 months

Nominated Project Contact(s)

Alec Breen and Iain Foster

Project Budget

£195,000.00

Summary

Multi storey buildings and their residents occupy a very difficult sector to access in order to improve safety, reduce fuel poverty and address technical issues with the assets within the buildings. If new high storey properties were built today they would not have a gas supply to every floor and would optimise the use of clean alternative energy supplies. If a gas network removed the Gas supply to the building it has the potential to impact on the electricity network and increase the resident's exposure to fuel poverty. Replacing these assets is expensive and technically difficult

Third Party Collaborators

Community Energy Solutions

Nominated Contact Email Address(es)

innovation@northerngas.co.uk

Problem Being Solved

Multi storey buildings and their residents occupy a very difficult sector to access in order to improve safety, reduce fuel poverty and address technical issues with the assets within the buildings. If new high storey properties were built today they would not have a gas supply to every floor and would optimise the use of clean alternative energy supplies. If a gas network removed the Gas supply to the building it has the potential to impact on the electricity network and increase the resident's exposure to fuel poverty. Replacing these assets is expensive and technically difficult

Method(s)

Working jointly with two major authorities to undertake a feasibility study into a variety of options to de-risk these builds, provide options for future low carbon solutions, work within development plans to determine optimal solutions and work up proposals for

selected project plans. Identifying a multi story building or group of buildings with high level of fuel poverty, working with NPG & Housing Associations to facilitate a renewable heat source project.

Scope

Manage and co-ordinate:

• Partners and their expectations within the project

• budget

• timescale

• quality

• internal and external communications

Write and maintain the brief for the project. Recruit social housing providers with suitable properties and who are able to commit to the project, to be as much in line with DNO priorities as possible.

Assess interest against agreed criteria, including organisational commitment to pursue this line of regeneration approach. Dependent on the level of work already undertaken by the social housing provider, coordinate initial feasibility studies Provide additional resource for NGN and NPG in connection with the project

Acquire the services of a suitably qualified consultancy company through a competitive selection process, to include writing a brief for the feasibility studies

Ensure the selected experts follow the brief, check their work, question their findings and ensure they cover all relevant options

Liaise with industry sector specialists to ensure best practice and generate maximum publicity for the work and acknowledgement for NGN's (and NPG's) contribution. Assess funding opportunities based on potential technical solutions

Objective(s)

This is a collaborative project between four organisations into shifting our approach to supplying energy to MSB's and researching alternative approaches to managing fuel poverty, alternative heating and power and managing resident needs and expectations.

This approach to multi organisation collaboration to resolve a number of building energy related issues is unique in the UK and will move this project from discussion planning stage to setting out exact requirements becoming a model for future collaborations with other northern authorities.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

Above ground asset on buildings above six storeys are a risk to the residents and the buildings. Maintenance is extremely labour intensive and difficult. Detailed inspection, repair and replacement are intrusive for the residents, expensive and time consuming.

Removing these assets and leaving residents with Electrical Heat could result in further fuel poverty and place an unacceptable burden on the electricity grid.

Removing high rise supplies and providing residents with a renewable heat source that removes the burden on the electricity network is a major challenge on all three parties in this project.

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

This will involve a desktop exercise of existing housing stock data held by both Utilities companies and LA Housing Associations. Research plans and suitability of housing in line with fuel poverty density. Undertake a feasibility study on a number of selected sites with specialist consultants on alternative heating proposals. This will cover Leeds City Council and Newcastle City Council Areas.

Technology Readiness at Start

TRL4 Bench Scale Research

Technology Readiness at End

TRL6 Large Scale

Geographical Area

Newcastle & Leeds area

Revenue Allowed for the RIIO Settlement

Nil

Indicative Total NIA Project Expenditure

Initial Feasibility Study £19,500.

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)

This has the potential to provide savings to Local Authorities, Electricity or Gas these will be part of the feasibility study.

Please provide a calculation of the expected benefits the Solution

Not required research project

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

Can be replicated across all networks as each GDN has multi storey buildings that use gas and have some level of fuel poverty occupancy.

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

It is difficult to provide a detailed breakdown on the costs across GB without completing the options stage as it relies on the localized electricity network condition, number of local buildings, resident's level of engagement and willingness to fund specific projects at the right time in a building life.

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

This will inform Local Authorities on potential for dealing with at risk building containing gas risers. It will inform the energy sector on issues around these buildings and how working collaboratively alternative solutions can be found without the placing additional risk to the electricity network or placing additional costs on fuel poor customers.

Investigate the potential for alternative solutions and share these with other GDN's and DNO's

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

While only a small number of customers may use gas in these types of buildings replacement or repair impacts on every resident. Removal of these can increase the likelihood of increase fuel poverty or placing undue burden on the electricity network. Taking a holistic approach including the needs of the customers talking these issues can only be undertaken collaboratively. This feasibility study will inform all parties of the issues and develop a roadmap for future projects.

☑ 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

- [x] Yes