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

May 2020

Project Reference Number

NIA_SGN0163

Project Registration

Project Title

Live Service Transfer

Project Reference Number

NIA_SGN0163

Project Licensee(s)

SGN

Project Start

May 2020

Project Duration

0 years and 4 months

Nominated Project Contact(s)

Ryan Smith, Innovation Delivery Manager

Project Budget

£74,181.00

Summary

It is recognised that COVID-19 has created several new challenges for SGN in respect of their day to day working to ensure our customers, especially the most vulnerable, are kept safe and warm. Current working practices under COVID-19 means that SGN must avoid any access to customers property.

This project aims to address this challenge by carrying out an 8 week “conceptual phase” innovation sprint run.

Nominated Contact Email Address(es)

sgn.innovation@sgn.co.uk

Problem Being Solved

It is recognised that COVID-19 has created several new challenges for SGN in respect of their day to day working to ensure our customers, especially the most vulnerable, are kept safe and warm. Current working practices under COVID-19 means that SGN must avoid any access to customers property, (notwithstanding emergencies with right of entry duty to protect life and property, where our operatives will use full PPE including breathing apparatus). This has the knock-on implication that SGN’s REPEX function has no means to transfer a service without access the property and performing the required purge and relight (unless as noted in an emergency).

Method(s)

The aim of this project is to conceptualise a method of quickly and safely transferring services live without entering customers’ homes or disrupting supply. The key objective of this work will hopefully define a process that is not just technically viable but also practically viable risk assessed against the As Low As Reasonably Practical (ALARP) risk assessment methodology with the targeted options being:

- Temporary solution to address Steel services – all sizes up to 2” during COVID-19
- Temporary solution to address Small diameter (below 32mm) PE services during COVID-19

- Longer term options for interim / permanent solutions

Scope

This project aims to address this challenge by carrying out an 8 week “conceptual phase” innovation sprint run. During this phase, an innovation hot-housing methodology is proposed, with the forming of a Working Group of both Steer Energy and SGN employees. In addition to these individuals, Domain Experts from our supply chain and industry experts will be interviewed in order to gather additional information where necessary.

The Working Group will review the challenge and start to create solutions from a range of different approaches. Specific exercises will be used in order to promote individual thinking and maximise “can do” attitudes from the team. This group will then create prototypes (most likely design based rather than physical objects at this stage as primarily it needs a process development with the technology at hand), and then, if appropriate, peer review these ideas.

Objective(s)

The objectives of this project are to:

- Set up Project and Team
- Information Gathering
- Idea Generation
- Idea Development
- Idea Validation

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

The following success criteria for the project include the completion of:

- Create Working Group and define project challenges.
- Gather information and identify current practices and limitations.
- Generate ideas based on Working Group information.
- Develop ideas and present information to Working Group.
- Refine ideas and provide recommendations on going forward.

Project Partners and External Funding

STEER Energy

Potential for New Learning

This project aims to investigate the possibility of carrying out live service transfer. This is an age old issue where the potential risks and mitigations will be reviewed.

Scale of Project

The project involves carrying out initial information gathering, idea generation, development and validation. Following completion of this project further work may be carried out.

Technology Readiness at Start

TRL2 Invention and Research

Technology Readiness at End

TRL5 Pilot Scale

Geographical Area

The project will be carried out at both STEER Energy and SGN Office locations where possible. Due to COVID-19 teleconferences will be carried out until further notice.

Revenue Allowed for the RIIO Settlement

If the project is successful, the developed solution has the potential to safely, quickly and cost effectively allow SGN to perform live service transfers without entering the customers property or supply interruption.

Indicative Total NIA Project Expenditure

The total project expenditure is £74,181, 90% (£66,762.9) of which will be recovered via the NIA funding mechanism in line with the funding conditions.

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)

It is expected that if successful this project could provide Network Licensees with an opportunity to make live service isolations without having to enter customer premises. This therefore provides safety benefits to operatives and customers during the COVID-19 situation. Overall this project aims to support customers who may be in shielding but still required critical replacement work on their gas service.

Please provide a calculation of the expected benefits the Solution

This project focuses on the safety of our operatives and customers during COVID-19. Any outputs of this project will be calculated when the project is completed. The core driver for this project is to protect vulnerable customers who should not be left behind discussed or exposed to the COVID threat as a result of critical gas works need to transfer a service on to a new PE main.

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

Given that service isolations are carried across the UK, this project is applicable to all Gas Networks.

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

The cost of rolling this out will be reviewed on completion of the project depending on the project outputs. The Project is designed to develop a high TRL solution which is launched off as close as possible too existing tools and equipment readily available in the existing supply chain.

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 project applies to all Network Licensees as service isolations are carried out across the UK. This is an ongoing issue that needs to be addressed.

The outputs will be presented in a clearly defined report that will be available to the Gas Networks on request, this will allow the GDN's to make informed choices as to whether to invest in this technology.

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

Within the innovation strategy key 'Innovation Themes', this project primarily addresses Distribution Mains Replacement' as well touching on 'Reliability' and 'Maintenance'.

☑ 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.

A review has been made of all other Network Licensees and no other similar projects have been carried out.

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

The current mains replacement approach offers no flexibility meaning we must enter the property, disconnect the customer or not and replace the main. As we cannot predict which customer are likely to be isolation their supply SGN needs to develop a suitable approach that can be applied in the field avoiding any complex alternatively which could result in complete re-planning, part replacement, redesigning of project, leaving customers isolated amongst some of the likely issues which will arise. It is also recognised that the issues of having to enter people's homes to reconnect a supply is a 30 year old problem, but this particular challenge due to COVID-19 is likely to result in new behavioural and societal issues for SGN's customers compounding the issue, such as refused entry, which could be evident for as long as 24 months after the lockdown ceases based on projections at time of project registration.

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

This project involves developing a new technique to isolation live services.

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

A review of all other Network Licensees Innovation Funding Incentive Annual Reports and NIA portfolios has been performed and no similar projects have been identified.

This project has been approved by a senior member of staff

☑ Yes