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

Dec 2013

Project Reference Number

NIA_NGET0115

Project Registration

Project Title

Cable Stripping Truck

Project Reference Number

NIA_NGET0115

Project Licensee(s)

National Grid Electricity Transmission

Project Start

December 2013

Project Duration

0 years and 7 months

Nominated Project Contact(s)

Richard Attwell

Project Budget

£66,000.00

Summary

This process is innovative to the UK market. It has not been completed in a portable, direct, efficient route. Ultimately, the cable will be split, however this will be done by multiple companies, in multiple locations, each taking a slice of the profits along the way. National Grid are confident that this will provide not only value for NG, but also for the customer as part of the customer sharing mechanisms involved in the RIIO deal.

SG1is to cover the tender exercise that will allow us to critically evaluate submissions on the technical & economical feasibility of this whole project. Pending appropriate submissions, the project will come back for resanction.

Nominated Contact Email Address(es)

box.NG.ETInnovation@nationalgrid.com

Problem Being Solved

When National Grid decommissions cables, it is a standard contractual arrangement that the contractor completing the work has ownership of the cable. Until now, National Grid had no need to change this arrangement, however we now have an opportunity to maximise the value of our decommissioned assets, largely due to the market value of the component materials.

Copper is trading in the region of £450-500 per kilogram, with a predicated increase in costs over the next few years. In 1 metre of typical Oil Filled Cable, there is approximately 25kgs of raw copper. We currenlty have over 4500km of cable in the ground on the NGET system, which equates to £5.75bn of copper in the ground. We estimate that we lose approximately 40% of the value of this cable system due to the requirements by third parties to process and recycle.

Method(s)

Development & Demonstration

The method has been proposed by National Grid to build a portable processing plant that can take in whole sections of cable, and then give out seperated core components for recycling.

Current project cost of £66,000 is for SG1 only.

This project will take a stage gated approach to this problem:

SG1: Write a scoping document and supporting information for a tender exercise. Review and evaluate the tender submissions.

SG2: Having evaluated the tender submissions, we will choose the most appropriate supplier and design & build this facility.

SG3: Assuming successful build, we will trial this equipment on an appropriate cable section as the first of a kind in the country.

SG4: Assuming successful trial, we will disseminate and demonstrate this equipment to the industry to prove its value and drive a more competitive market.

Scope

This process is innovative to the UK market. It has not been completed in a portable, direct, efficient route. Ultimately, the cable will be split, however this will be done by multiple companies, in multiple locations, each taking a slice of the profits along the way. National Grid are confident that this will provide not only value for NG, but also for the customer as part of the customer sharing mechanisms involved in the RIIO deal.

SG1is to cover the tender exercise that will allow us to critically evaluate submissions on the technical & economical feasibility of this whole project. Pending appropriate submissions, the project will come back for resanction.

Objective(s)

The projects objectives are:

In SG1: National Grid write a scoping document and supporting information for a tender exercise, then review and evaluate the tender submissions.

National Grid and Utilise will engage with the Environment Agency to ensure environmental needs are met.

In SG2: National Grid will choose the most appropriate supplier and build this facility.

In SG3: National Grid will trial this equipment on an appropriate cable section.

In SG4: National Grid will disseminate and demonstrate this equipment to the industry.

Further objective: Provide a business implimentation document.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

This project will be successful if:

In SG1: National Grid write a scoping document and supporting information for a tender exercise, then review and evaluate the tender submissions.

National Grid & Utilise provide a document detailed considerations needed for the EA to be satisfied, and potential methods of overcoming problems.

In SG2: National Grid will choose the most appropriate supplier and build this facility.

In SG3: National Grid will trial this equipment on an appropriate cable section.

In SG4: National Grid will disseminate and demonstrate this equipment to the industry to prove its value and drive a more competitive market.

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

This project is focussed on an appropriate scale - it will only build one unit. As such, we cannot reduce the scale any further and still provide the benefits to customers.

Technology Readiness at Start

TRL5 Pilot Scale

Technology Readiness at End

TRL8 Active Commissioning

Geographical Area

This vehicle will be mobile, and as such can cover the whole of the UK. It will however, only work where decommisioned cables are already being removed from the ground.

Revenue Allowed for the RIIO Settlement

Zero

Indicative Total NIA Project Expenditure

£66,000

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)

Currently, we do not know how much of a saving is possible as this is dependant on other factors, however we know that this equipment will be valuable to National Grid & DNOs in the future.

Please provide a calculation of the expected benefits the Solution

We wil update this on the Smart Networks portal when SG1 has been completed. This will give an accurate figure as to the proposals from the companies tendering for this work.

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

This work can be applied to all areas where there are cable systems installed.

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

This is unclear at the moment as it is dependant on the tender submissions, however having initially tested the market, National Grid believe this should be no more than £850,000 for one van. This should be sufficient to cover the whole of the UK.

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)

This project is addressing Affordability, Environment, Circular Economy.

☑ 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