

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

Apr 2014

Project Reference Number

NIA_NGN_077

Project Registration

Project Title

Specification Risk Prioritisation

Project Reference Number

NIA_NGN_077

Project Licensee(s)

Northern Gas Networks

Project Start

April 2014

Project Duration

0 years and 7 months

Nominated Project Contact(s)

Dan Sadler (Head of Head of Energy Futures)

Project Budget

£15,000.00

Summary

Currently, document management is limited to a scoring system which fails to take in to account the weighting which each risk variable should be afforded; meaning that for example a simple document rebrand would have the same scoring impact as a change in external legislation. Furthermore, it is felt that currently not all relevant risk variables have been identified; for example CAPEX, REPEX, OPEX, environmental, procurement, supply chain, HS&E and document complexity factors have not been considered.

This project will aim to essentially build upon the existing scoring system by identifying all of what Northern Gas Networks (along with Quality Assurance Engineers from QEM Solutions) believe to be the key risk variables which should be taken in to account when prioritising document risk. A 'risk variable' is a factor that it is believed impacts upon a documents performance, for example: If any external legislation applicable to the gas industry is reviewed, the changes made could have a negative impact upon our internal standards. As Northern Gas Networks have a legal obligation to comply with external legislation, it can be identified as a 'risk variable' and should be taken in to account when prioritising the risk which a document may pose to business activity.

The end result of applying all identifiable risk variables to each of Northern Gas Networks engineering standards will be a table displaying the 'highest risk' document at the top, with the rest following in descending order.

Validation of this database will be achieved through the gathering and analysis of live industry data which will be gathered from document management records and feedback from all levels of the business via a questionnaire.

Third Party Collaborators

QEM Solutions

Nominated Contact Email Address(es)

innovation@northerngas.co.uk

Problem Being Solved

Northern Gas Networks are currently lacking a robust method of proactively managing and prioritising their technical engineering documents in order of the risk they pose to both everyday & more bespoke activities. Furthermore, there has been no budget allocation in any previous price control period with which to address this very apparent and ongoing issue.

Many of the live engineering documents which NGN have an obligation to comply with have fallen behind known best practice, are not commercially effective & arguably hinder significant innovation. The vast majority also fail to consider carbon impact; despite one of the key outputs of RII0-GD1 being to maximise customer benefit & reduce business carbon footprint (BCF).

Adding to the aforementioned issue, post network sale in 2005 saw each GDN keep in retention their own set of engineering standards, effectively quadrupling the number of live industry standards.

Method(s)

Northern Gas Networks, along with QEM Solutions will produce a Risk Prioritisation database which will tackle the aforementioned issue. By taking in to account all contributing factors (eg. deviations, bulletins, reviews, external legislation, commercial/carbon impact) we will be able to design a database which will in essence produce a league table that will display (in descending order) the risk each specification (if not reviewed) poses to Northern Gas Networks.

Scope

Currently, document management is limited to a scoring system which fails to take in to account the weighting which each risk variable should be afforded; meaning that for example a simple document rebrand would have the same scoring impact as a change in external legislation. Furthermore, it is felt that currently not all relevant risk variables have been identified; for example CAPEX, REPEX, OPEX, environmental, procurement, supply chain, HS&E and document complexity factors have not been considered.

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Objective(s)

We propose a systematic approach to the prioritised review process required to analyse the risk/benefits of reviewing some or all of the documents currently in the Northern Gas Networks management system.

Objectives:

- Identify the relevant risk variables and establish risk scales
- Capture data to complete risk analysis
- Analyse risk to apply weightings to risk variables
- Eliminate lower risk documents
- Prioritise remaining document

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

Success will be measured on whether or not the end result can accurately prioritise each engineering standard according to the risk it poses to Northern Gas Networks' business activities after being held up against each 'risk variable'. Ultimately, the success of this project will be realised when both commercial and carbon benefits begin to appear as a result of being able to proactively implement effective document control and management.

It is also hoped that in the longer term, collaborative work with the other GDNs and IGEM in the form of NGNs 2014 NIC bid will lead to this database being applicable across the industry.

The success of this project will form the basis of our NIC bid in which we intend on working with all GDNs and IGEM to update the majority of the UK gas industry engineering standards. The aim of this project and of the NIC bid is to ensure that the industry as a whole are working to the same version of each standard and that we become more accessible for the supply chain.

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

Initially will be held by the Northern Gas Standards department but longer term would reside with the quality assurance body set within IGEM up subsequent to NIC bid success.

Technology Readiness at Start

TRL3 Proof of Concept

Technology Readiness at End

TRL4 Bench Scale Research

Geographical Area

Limited to the Northern Gas Networks patch initially. Whilst all networks inherited the same suite of documents after network sale in 2005, internal reviews have since taken place which may mean that there will no doubt be differing versions of the same standards when compared across networks. Subsequently, the first version of this database will only be applicable to the Northern Gas Networks engineering standards.

However, we intend to use the learning from this project to form part of our NIC bid. In this scenario, the database would reside with the aforementioned independent document management and quality assurance body which would reside within IGEM.

Revenue Allowed for the RIIO Settlement

N/A

Indicative Total NIA Project Expenditure

£13k - external costs

£2 - internal costs

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 is a research project to determine whether or not standards prioritised and reviewed with risk, cost and carbon impact taken in to consideration could deliver considerable benefits to the industry and its customers. Not assuming the every document review will reap such considerable benefits, below is an example of the savings which could be made by reviewing one standard to implement best cost and carbon practice.

Example:

Currently Northern Gas Networks are compliant with 'NGN/SP/B12 – Steel Bends, Reducers & Cap Ends > 7 bar' which provides guidelines for the procurement of steel bends. A recent survey carried out by the standards department found that a 6" bend compliant with B12 cost the network £150, whereas a commercial quality 6" bend (used by other industries at far greater pressures) cost just £50 and is proven to be fit for purpose, a potential saving of 66%.

This is an example of the savings that could be achieved through thorough revision of one document.

Please provide a calculation of the expected benefits the Solution

N/A Research based project

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

The method is very replicable across the UK and could be adopted by all GDNS and IDNs. This however would not be required should the larger scale NIC bid achieve success as in that instance database would reside with the independent industry standards custodian for application across the industry.

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

Costs of rolling this project out across the UK are thought to be minimal as the vast majority of funding is required for the development of the database rather than its dissemination.

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

Initially the learning generated by this project will be exclusive to Northern Gas Networks, however future application across the entire UK would see the same learning disseminated to all GDNs.

The industry would learn effective & efficient document management skills which would encourage innovation, incorporate commercial sensibility and would pave the way for being able to make a positive impact upon BCF as per outputs outlined in RIIO-GD1 and GD2.

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

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