

## NIA Project Registration and PEA Document

### Date of Submission

Jan 2014

### Project Reference Number

NIA\_NGGT0036

## Project Registration

### Project Title

Standards Mapping Tool (SMT)

### Project Reference Number

NIA\_NGGT0036

### Project Licensee(s)

National Gas Transmission PLC

### Project Start

August 2013

### Project Duration

0 years and 7 months

### Nominated Project Contact(s)

Quentin Mabbutt

### Project Budget

£33,000.00

## Summary

Documents within the standards suite are continuously monitored and, where necessary, reviewed to ensure they are compatible with National Grid's requirement to operate a safe and efficient transmission network. The standard's documents include procedures for the maintenance of gas transmission and distribution equipment, standards for civil and structural engineering works, validation of measurement systems, major accident prevention policies, and documentation and audit requirements.

As well as referencing each other, these documents also reference standards, technical documents and regulations from external bodies such as the UK government, British Standards Institute (BSI), the Health and Safety Executive (HSE), the American Petroleum Institute (API) and the Institute of Gas Engineers and Managers (IGEM). Each National Grid document can contain up to 200 references to other documents.

A majority of the standards reference other documents and currently there is no convenient method to readily determine the interlinking of these standards. This has the potential for documents to be reviewed in isolation resulting in inconsistency and gaps within the standards suite. The programme proposes an innovative use of the metadata tables to enable reference mapping of a series of documents. The technique has been used for medical and legal journals but no specific standards application has been found. National Grid is considered the first major utility to engage in the development of a specific referencing mapping application.

The development of a desktop Standards Mapping Tool (SMT) will present the reference inter-relationship between standards, resulting in a more holistic approach to standard management.

## Third Party Collaborators

Oxford Computer Consultants

## Nominated Contact Email Address(es)

## Problem Being Solved

Gas Transmission Asset Management (GTAM) is responsible for the update and maintenance of the standards suite of approximately 540 documents. These documents provide the safety, legislative and operational framework for the National Transmission System (NTS).

A majority of the standards reference other standards or legislation, at present there does not exist functionality to make it possible to determine these inter-relationships. This presents a risk of undesirable inconsistencies or gaps within the standards suite.

## Method(s)

Not available

## Scope

Documents within the standards suite are continuously monitored and, where necessary, reviewed to ensure they are compatible with National Grid's requirement to operate a safe and efficient transmission network. The standard's documents include procedures for the maintenance of gas transmission and distribution equipment, standards for civil and structural engineering works, validation of measurement systems, major accident prevention policies, and documentation and audit requirements.

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The development of a desktop Standards Mapping Tool (SMT) will present the reference inter-relationship between standards, resulting in a more holistic approach to standard management.

## Objective(s)

This project will develop a Standards Mapping Tool (SMT) to assist management of the standards suite within GTAM, and will be valid for implementation in other areas of the business.

## Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

## Success Criteria

The ability to readily determine the reference inter-relationship of standards to improve document management efficiency, thereby enhancing the efficacy of the review process.

## Project Partners and External Funding

n/a

## Potential for New Learning

n/a

## Scale of Project

The SMT software solution to be developed will include desktop and intranet based document mapping functionality with both visual and tabular output, accessible across GTAM from a dedicated, secure site.

## Technology Readiness at Start

TRL4 Bench Scale Research

## Technology Readiness at End

TRL7 Inactive Commissioning

## Geographical Area

These standards documents provide the safety, legislative and operational framework for the National Transmission System (NTS) in the UK.

## Revenue Allowed for the RIIO Settlement

None

## Indicative Total NIA Project Expenditure

£33k

## 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)

Savings for Gas Transmission alone are estimated to be 0.25 FTE/year at £25k.

In a single year approximately 85 gas transmission standards undergo a formal review. The SMT software solution will assist in improving the efficiency of the review process by ensuring that the interrelationships between respective standards are understood. This reduces potential inconsistencies within the individual standards' reference list, and provides FTE efficiencies.

The SMT software solution will have wider applicability, valid for any series of documents where specific data needs to be efficiently extracted and cross referenced. Therefore the savings will be significantly increased once utilized within other areas of National Grid.

#### Please provide a calculation of the expected benefits the Solution

Base Cost for annual review of Gas Transmission Standards suite (85 documents): 8 FTE ~ £700k

Margin Cost for same review workload for Gas Transmission only: 7.75 FTE ~ £675k

Further benefit will be realised as the solution is implemented in other areas of the business.

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

The solution is considered generic and will function across a standard computer platform.

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

There are no additional implementation costs.

### 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

A generic metadata mapping tool will be developed to function on both a standalone or intranet platforms.

#### 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 work fits within the System Operability theme, and also fulfils the Information Security and Knowledge category under the Reliability theme.

- 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