

NIA Project Registration and PEA Document

Date of Submission

Feb 2014

Project Reference Number

NIA_NGGT0050

Project Registration

Project Title

Network Investment Stakeholder Engagement

Project Reference Number

NIA_NGGT0050

Project Licensee(s)

National Gas Transmission PLC

Project Start

February 2014

Project Duration

1 year and 1 month

Nominated Project Contact(s)

James Whiteford, box.GT.innovation@nationalgrid.com

Project Budget

£161,000.00

Summary

In response to stakeholder feedback, National Grid is looking to develop a tool to communicate its proposed investment decisions on the National Transmission System more effectively.

National Grid currently uses a network analysis package, Simone. Historically the output from Simone has been presented to a variety of stakeholders in the form of power point presentations. Simone is a technical network modeling tool and the output is extremely detailed. The objective of this type of stakeholder engagement is to enable stakeholders to consider a variety of various investment options, understand the benefits of the investment and the potential consequences of not investing. The current tools do not make it easy for stakeholders to understand the issues and make this kind of considered decision.

National Grid intends to embark on a significant stakeholder engagement programme in April 2014 in relation to System Flexibility and the IED (industrial emissions directive) compressor replacement programme. It is therefore proposed that a tool will be developed that will interface with Simone and enable the user to consider investments that National Grid is proposing on the network and select a number of approved pre-run studies that contain different supply and demand scenarios and network configurations. It will also be essential that any detail presented respects the commercial confidentiality of network users.

Third Party Collaborators

Oxford Computer Consultants

Nominated Contact Email Address(es)

Box.GT.Innovation@nationalgrid.com

Problem Being Solved

National Grid will embark on an intensive stakeholder engagement programme from April 2014 onwards related to investments, such as compressor replacement, that are required on the network over the RIIO period. Previous feedback from interaction with stakeholders has indicated that the technical information, including output from network analysis studies needs to be made more easily understandable by and appealing to non specialists.

Method(s)

Key tasks within the scope include:

- Detailed design of the tool, phase 1 and 2.
- Database and data model development
- Analysis code
- Story board editor
- System Testing

Although the work done to date has been very promising, it has not been possible to meet all of the requirements set out in phases 1 and 2 above within the original tight timescales and budget. In order to make best use of the extended time requested, the project team has captured valuable feedback and learnings from stakeholder tool workshops held in August and September 2014, in order to further refine the tool requirements and provide clear deliverables and dates. Further work will therefore be undertaken to build upon the successful outputs achieved during the first two phases of this project.

Scope

In response to stakeholder feedback, National Grid is looking to develop a tool to communicate its proposed investment decisions on the National Transmission System more effectively.

National Grid currently uses a network analysis package, Simone. Historically the output from Simone has been presented to a variety of stakeholders in the form of power point presentations. Simone is a technical network modeling tool and the output is extremely detailed. The objective of this type of stakeholder engagement is to enable stakeholders to consider a variety of various investment options, understand the benefits of the investment and the potential consequences of not investing. The current tools do not make it easy for stakeholders to understand the issues and make this kind of considered decision.

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Objective(s)

To develop a tool that will communicate the investments that National Grid is proposing on the network to external and internal users in an engaging manner.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

Development of a user interface tool and positive feedback received from stakeholders.

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

The project is scaled to ensure the correct interaction between Simone and the new tool across a range of different scenarios.

Technology Readiness at Start

TRL4 Bench Scale Research

Technology Readiness at End

TRL7 Inactive Commissioning

Geographical Area

This is a desk based study, which will take place at the OCC premises in Oxford and National Grid House, Warwick.

Revenue Allowed for the RIIO Settlement

None

Indicative Total NIA Project Expenditure

£161,000

Project Eligibility Assessment Part 1

There are slightly differing requirements for RII-O-1 and RII-O-2 NIA projects. This is noted in each case, with the requirement numbers listed for both where they differ (shown as RII-O-2 / RII-O-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 RII-O-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 (RII-O-1 projects only)

The main benefit of this project is a tool that will enable stakeholders to better assess and influence National Grid's investment plans and hence ensure that the network is fit for purpose into the future.

Please provide a calculation of the expected benefits the Solution

National Grid Gas Transmission baseline funding for compressors is approximately £400m assuming that stakeholders influence this more effectively this could result in the non replacement of a compressor station providing an estimated customer benefit of £40m. Alternatively it may result in requests for additional replacement providing more flexibility and security of supply, which stakeholders have evaluated as having a higher value than the cost of £40m investment.

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

The tool will enable the user to engage with a range of investment scenarios applicable across the NTS.

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

Roll out costs are likely to include the introduction of new scenarios for additional investment decisions, as and when these are required.

Requirement 3 / 1

Involve Research, Development or Demonstration

A RII-O-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

RIO-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

Although the tool will interface to Simone, which is the network modeling package used by National Grid Gas Transmission, the principles developed of how best to communicate technical information to non technical stakeholders could be applicable to any of the other licensees.

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

This is linked to our Commercial 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