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

Mar 2013

Project Reference Number

Project Registration

Project Title

Scenario Scoping for DSM Price Signals

Project Reference Number

Project Licensee(s)

National Energy System Operator

Project Start

June 2011

Project Duration

0 years and 7 months

Nominated Project Contact(s)

National Grid TO Innovation Team

Project Budget

£38,000.00

Summary

Originally Poyry provided a report to Electricity North West Ltd which gave an initial indication regarding the strength of price signal Electricity North West Ltd might be able to provide to a market where the distribution network is at risk would be strong enough to over-ride signals from Grid and suppliers. Subsequently Electricity North West Ltd approached National Grid to participate in a joint study looking at the uses and interaction of DSR (Demand Side Response) in general.

The analysis requires the definition of drivers by stakeholders and scenario analysis in order to be able to begin to quantify the total value of the different ways in which Demand Side Management (DSM) can be used by different parties. Understanding the drivers and scenarios will allow beginning to see when uses of DSR by different stakeholders may be in conflict and when they might be aligned. This is in turn allows to investigate the value to different parties of DSR in particular circumstances and hence the way in which it may be used. This will ultimately feed into the analysis of commercial arrangements that need to be struck between parties.

There are five key dimensions of understanding the uses of DSR:

- Magnitude: How much DSR will be needed in MW terms
- Duration: How long will the DSR need to be used for, minutes, hours etc.
- Timing: When will DSR be dispatched, time of year, time of day etc and what is the frequency associate with this and how often within season, within week
- Notice period: Over what period of time will DSR be utilised and how far in advance will this be known i.e minutes, hours, days etc.
- Location: When will the use of DSR need to consider locations i.e. where and at what level of the T&D network will DSR be used and

how localised will this be.

Nominated Contact Email Address(es)

box.so.innovation@nationalgrid.com

Problem Being Solved

Method(s)

Scope

Objective(s)

To develop an understanding of when the stakeholders of DSM (TSO, DNO and supplier) are in tandem or in conflict and to present an initial quantification of the value associated with various uses of DSM.

A detailed quantitative assessment can take place as an extension of this study if it is deemed useful in light of this initial work.

Consumer Vulnerability Impact Assessment (RIIO-2 Projects Only)

n/a

Success Criteria

n/a

Project Partners and External Funding

n/a

Potential for New Learning

n/a

Scale of Project

n/a

Geographical Area

Revenue Allowed for the RIIO Settlement

Indicative Total NIA Project Expenditure

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)

n/a

Please provide a calculation of the expected benefits the Solution

n/a

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

n/a

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

n/a

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)

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

Please demonstrate how the learning from the project can be successfully disseminated to Network Licensees and other interested parties.

Please describe how many potential constraints or costs caused, or resulting from the imposed IPR arrangements.<

Please justify why the proposed IPR arrangements provide value for money for customers.

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