

## NIA Project Registration and PEA Document

### Date of Submission

May 2012

### Project Reference Number

WPDT1005

## Project Registration

### Project Title

Seasonal Generation Deployment

### Project Reference Number

WPDT1005

### Project Licensee(s)

National Grid Electricity Distribution

### Project Start

January 2011

### Project Duration

2 years and 4 months

### Nominated Project Contact(s)

WPD Future Networks Team (01332 827446)

### Project Budget

£300,000.00

## Summary

Future energy scenarios clearly show that peak demand on the distribution network is set to increase. This project will explore a solution to reduce the impact on the existing network from such peaks. It will test the technical aspects associated with controllable demand and automated generation, and development of innovative commercial arrangements for generation availability and operation. The project will deliver new learning on the cost effectiveness of such arrangements. The project will consist of two phases:

Phase 1 will involve the installation of a single point of generation at an 11kV substation site. The key objective of this phase will be to initiate, develop and deploy the engineering interface, commercial arrangement and first stage generation control methodology.

Phase 2 will utilise existing network connected generation along with strategically placed generation connected to an adjacent section of 11kV network, which will be a test within a more complex network environment. This will provide a platform for commercial arrangements and control methodologies to be further developed.

## Problem Being Solved

### Method(s)

### Scope

### Objective(s)

Project objectives are as follows:

- Develop and deploy an automated network generation control system
- Provide network support through the integration of an automated demand triggered generation system
- Develop and deploy an availability and commercial operating arrangement - DNO to DSO
- Provide a commercial arrangement similar to the Short Term Operating Reserve (STOR) arrangements between aggregators and

NG, but specifically tailored to reflect the needs of the local grid rather than GB system balancing

- Increase network flexibility and security through the use of robust generation
- Ensure that the engineering model and commercial framework are aligned in order to provide maximum benefit for existing assets and end user customers
- Assess the benefit from capital deferment, by complimenting existing network assets with strategic generation thus maximising asset life.

### **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 RII0-1 and RII0-2 NIA projects. This is noted in each case, with the requirement numbers listed for both where they differ (shown as RII0-2 / RII0-1).

### 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 RII0-2 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 (RII0-1 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 RII0-1 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

RII0-2 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