

## Network Innovation Allowance Closedown Report

*Notes on Completion:* Please refer to the appropriate NIA Governance Document to assist in the completion of this form.

Network Licensees must publish the required Project Progress information on the Smarter Networks Portal by 31st July 2014 and each year thereafter. The Network Licensee(s) must publish Project Progress information for each NIA Project that has developed new learning in the preceding relevant year.

### Project Closedown

**Project Title**

Asset Health Modelling

**Project Reference**

NIA\_NGGD0003

**Project Licensee(s)**

National Grid Gas Distribution

**Project Start Date**

Oct 2011

**Project Duration**

23 Months

**Nominated Project Contact(s)**

John Madden – Project Manager and Darren White – Innovation Portfolio Manager

**Scope**

The scope of this project includes a gap analysis and development of proof of concept model, to be executed in the following steps:

- ┆ CBRM Audit across two asset categories
- ┆ Gap Analysis – RIIO GD1
- ┆ Roadmap plan for 2013 submission
- ┆ Commencement of CBRM excel model
- ┆ Completion of CBRM excel model (District Governors) (Pressure Reduction Installations)

**Objective(s)**

The objective of this project is to develop a Condition Based Risk Model (CBRM) that will determine the future health index of National Grid Gas Distribution's governors and pressure reduction assets in order to prioritise future investment decisions. The CBRM tool will allow the future Health Index (HI) and Probability of Failure (POF) of these assets to be simulated and assessed. This will enable understanding of asset condition and criticality, identifying and modelling different interventions to mitigate risk, and prioritise and select optimal expenditure via a condition based risk approach.

**Success Criteria**

Development of an asset expenditure modelling tool which is based on asset condition, probability of asset failure and risk. This risk model will provide a robust, auditable and refreshable system for asset management which will support all future RIIO-GD regulatory submissions, and has a user interface that allows the following:

- ┆ The ability to compare and manage governor and pressure reduction installation asset groups on a comparable basis;
- ┆ The ability to create robust and defensible investment plans based on a sound understanding of the assets;
- ┆ Providing demonstrative evidence of asset condition that can assist in out performing regulatory incentive output measures;
- ┆ A quantifiable, risk based approach to both CAPEX and OPEX investment with a clear audit trail;

- ┆ A proven methodology, employed by others to support their regulatory submissions;
- ┆ An on-going framework for managing assets using industry best practice techniques.

### **Performance Compared to the Original Project Aims, Objectives and Success Criteria**

The original project aims, objectives and success criteria have been met and an asset expenditure CBRM modelling tool has been developed.

### **Required Modifications to the Planned Approach During the Course of the Project**

There were no changes to the planned approach.

### **Lessons Learnt for Future Projects**

Issues were encountered with compatibility of data with the software developer requirements, in future the requirement for data sets will be outlined within the project scope.

**Note:** The following sections are only required for those projects which have been completed since 1<sup>st</sup> April 2013, or since the previous Project Progress information was reported.

### **The Outcomes of the Project**

A CBRM model for a single asset group (District Governors) has been developed in order to provide National Grid the opportunity to understand the CBRM process. The District Governor CBRM model incorporates the factors that NGG consider to be relevant in terms of their impact on the health, criticality and risk of their District Governors, including asset age, expected service life, situation, location and duty and environment.

The CBRM model forms part of a wider strategic piece of work across the Gas Distribution Networks to determine the most appropriate methodology to assess and report on asset health and criticality.

### **Planned Implementation**

The implementation of the CBRM model is reliant on further work being completed with the other Gas Distribution Networks to determine other suitable and complimentary asset health and criticality modelling tools.

Once a decision between the Gas Distribution Networks and Ofgem has been achieved, this work will feed in alongside other asset categories, to deliver a series of decision support tools which will help grade our assets in terms of health, and help shape our asset portfolio over the remaining RIIO period.

### **Other Comments**

No further comments.