Date of Submission

January 2016

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	Project Reference
Biomethane Connection Guidelines	NIA_NGN_046

Project Licensee(s)	Project Start Date	Project Duration
Northern Gas Networks	Oct 2013	2 Years

Nominated Project Contact(s)

Dan Sadler – Head of Investment Planning, Major Projects Dennis Habergham – Gas Specialist Consultant and Iain Foster – Data & Asset Health Manager

Scope

Networks want to facilitate and encourage new sources of gas to enter our networks that meet quality standards, and where necessary adapt quality standards to facilitate the new sources of supply and minimise investment on major infrastructure. At present, produces have no experience or best practice guide to help them through the installation and management of biogas connections. Networks have a variety of policies and procedures to undertake entry connections but these are limited to the transmission system.

As a result of this project with NWL documented guides will be produced as each side goes through installation process. A specialist gas consultant will be employed over the duration of the project to capture all the learning and experiences from a producers and network perspective and document these stages including:

- Initial Enquiry from Gas Producer/Developer
- Gas Producer/Developer to place order for the design or design and build
- Undertake construction phase for all work elements, including any NRO's for u/p connection and commissioning up to ECV upstream of ROV
- Handover process to Gas Network
- Other Considerations

Objective(s)

Objectives:

1. To accelerate progression of the Howden project supporting with gas specific expertise
2. To liaise between NWL and NGN to ensure hurdles are overcome quickly and NGN's interests are maintained
3. To develop a user guide to bio-methane injection – This guide needs to be broken down into what is to be covered i.e:

- Gas Compression – learning from the Skipton project putting in the first live compression system and its operation over a 12 month period??

- Siloxanes – Aspects of removal and compliance with HSE requirements
- Oxygen level –
- Design criteria – meeting or modifications to IGEM/TD/16

To provide the Networks and suppliers/operators of waste treatment biomethane plants with the first user guide and best practice recommendations for connection to the gas distribution network with the requirements of that plant in relation to minimum/maximum connection, gas odourisation, dewpoint, gas quality measurement etc. To allow consistency across the gas industry for the benefit of suppliers/operators of biomethane installations and gas distribution network operators.

Success Criteria

Consistent assessment of requirements of waste treatment gas plants for connection to the gas distribution network. This will ensure a secure and reliable gas supply.

Enable cost savings for the both the network operator and the waste treatment gas producer by having common agreed connection guide. Reducing the time in planning, designing and installing renewable gas production from this source.

To produce a single simple document for use within Biomethane gas sector that guides and informs both the networks and the produces on all aspects of introducing a successful project.

To produce a report detailing all technical aspects of the Howdon treatment works project and how this informed the production of the guide demonstrating the use of a guide help reduce the time to delivery.

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

The Howden Biomethane connection was commissioned on the 18th December 2014. Throughout the project a regular interface meeting was held between NGN and NWL to progress the necessary steps required to progress the connection. The ongoing support with specific gas expertise was key in progressing these steps successfully. Also a lot of time was spent developing and documenting these steps so that they could be incorporated into the guidance document.

Agreeing a final draft of the document has took some time due to the number of internal and external people involved in the project such as NGN's LTS Planning, Network Integrity, Gas Quality, System Control, Future Utility Solutions and NWL.

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

Due to the complexity of the connection process and amount of work involved in producing a draft guidelines document a further external consultancy resource, Aqua Gas was brought into write the guidelines.

Lessons Learnt for Future Projects

The service provider and NGN are both entering into new territory with this complex project. Production of the guide will aid the connection of future biomethane projects for Producers and GDNs.

The learning from the Howden connection has already proved beneficial for both NGN and NWL. NWL are planning on starting another project this year within NGN's Network and there are also other Producers planning to connect.

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

The Outcomes of the Project

The Biomethane Connection Guidelines is a comprehensive reference document incorporating the following sections:

Biomethane – A Unique Opportunity

Getting Started with a Biomethane Project

Working with Stakeholders

Production Process – Feedstock to Gas Clean Up

Gas Injection: An Overview

Gas to Grid: A five stage process

Technical section

Documentation

Construction & Commissioning

Regulations and Standards

Producers Tips

Glossary of Terms

Planned Implementation

The final document has been put into a format suitable for external publication and has been upload onto the NGN website. Hard copies of the guidelines are also available on request.

Other Comments

The full guidelines published as a result of this project has also been uploaded to the Smarter Networks Portal