

Network Innovation Competition Full Submission

Supplementary Answer Form

Tick if this answer is Confidential: ☐

Tick if this answer has been provided verbally: ☐

Project code:	NGGDGN01	Question Number	11
Question date	20/8/13	Answer date	22/8/13
Submission section question relates to	2.2.3		
Topic	Technical Description		
Question	What flow rate of BioSNG will be made and what are the issues associated with scaling this?		
Notes on question			
Answer	<p>The demonstration plant has been designed to enable continuous operation of the bio-SNG conversion facility, storing raw syngas from the gasification unit which runs frequently, but not necessarily continuously. The demonstration plant is designed at a capacity of around 20kWth of Bio-SNG.</p> <p>The demonstration plant is designed in a way that will inform design of full scale plant.</p> <p>The primary design attribute is the geometry and heat transfer detail of the reactor elements. There will be a single element in the demonstration system; the full scale device will comprise many geometrically similar elements. So for the key reactions scaling is mainly a question of using multiple elements in a single reactor vessel rather than trying to make them individually larger. This provides confidence in scaling of this primary component.</p> <p>For other parts of the system the main scaling challenge is to make it all small enough for the demo plant rather than up- scaling what are conventional processes to their normal and proven duty points. For the units selected, this downscaling can be done for the demonstration facility, and we are confident that the full scale facility will not face scaling issues.</p>		

Attachments	
Verbal Clarifications (Consultants)	