

Gas Network Innovation Competition Full Submission
Supplementary Answer Form

Project: Commercial BioSNG Demonstration Plant

Tick if this answer has been provided verbally: ☐

Project code	NGGDGN02/1	Question Number	28
Question date	29/9/15	Answer date	02/10/15
Submission section question relates to	General		
Topic			
	<p>Please can you clarify:</p> <ul style="list-style-type: none">• the benefits case for end consumers• the wider consumer benefits for the grid as a whole		
Notes on question			
Answer	<p>This project is a key enabling step to facilitate substantial incremental production of renewable gas in the form of BioSNG from residual waste streams. This confers both environmental and financial benefits to consumers.</p> <p>Delivery of renewable heat via the grid allows environmentally aware consumers to reduce their carbon emissions without needing to undertake substantial modifications to their existing heating systems, as would be necessary for heat pumps or biomass boilers. This ease of adoption is a particularly important benefit. In the bid documentation, the environmental benefit was shown to be a saving between 2.2-4.5 tonnes of carbon per annum (depending on accounting methodology used) for a typical household where the gas is delivered to domestic customers for heat. The environmental benefits accruing where the gas is used for transport applications is slightly higher per unit of renewable gas, with the benefit to the consumer cascading through lower embodied emissions in transported products and/or public transport.</p> <p>Either use offers comparable savings by 2050 of up to around 36 million tonnes per annum by 2050 based on 100TWh of BioSNG. This is over 0.5te per person per annum in the UK and a substantial contributor</p>		

	<p>compared to an annual energy emission target of 100 million tonnes. It is also noted that with Carbon Capture and Storage (CCS) infrastructure established, the storage-ready CO₂ produced by this process could enable 'bio-CCS' with even further carbon savings.</p> <p>The financial benefits to the end consumer have been assessed. The roll out of BioSNG is substantially more cost-effective than alternative pathways to decarbonising heat and transport. This will result in savings in the overall energy system which will ultimately be reflected in consumer bills. These savings are shown to be £4bn per annum by 2050, which equates to around £150 per household per annum. This is a substantial annual saving, at a level which is difficult to achieve through other means.</p>
Attachments	