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	26
Question date	15/9/15	Answer date	17/9/15
Submission section question relates to	General		
Topic			
	Following up on Q&A 10. If rolled out, what are your assumptions in the central benefits case about where BioSNG will connect in terms of NTS vs GDN network?		
Notes on question			
Answer	Our central benefits case and the base case used for comparison assume that gas is instantly transported to meet demand and can be stored until it is required. The benefits of the distributed connections offered by BioSNG have not been examined in detail or quantified. Technical and economic drivers makes it more likely that BioSNG plants will connect to the GDN rather than the NTS. This is influenced by the cost of connection, which at present is cheaper for GDN connections as a result of the biomethane market, which has enabled reduced costs of connection to the network. BioSNG plants will be built close to the periphery of towns and cities as these are the sources of waste. This also favours GDN connections as the NTS does not generally pass close to conurbations. Commercial BioSNG plants will produce more than 300GWh per annum of gas at pressures above 10 bar. Connections to the low pressure network are unlikely, but, depending on size of plant, connections to Medium Pressure network, Intermediate Pressure network and High Pressure network are possible. Anaerobic digestion biomethane plants generally produce lower		

	volumes of gas at low pressures, and tend to be built where the feedstock is located and therefore connect to whatever network is convienent and able to take the gas, typically the Medium Pressure or Intermediate Pressure networks. Given that the BioSNG process will produce gas at a higher pressure, connections to the Intermediate Pressure (2 to 7 bar) or High Pressure (over 7 bar) networks would be more attractive for BioSNG plants than for those producing biomethane by anaerobic digestion. If BioSNG plants are built with a primary consideration being connection to the network then we may see more High Pressure network connections. The overall impact of a large number of BioSNG facilities injecting gas at various points of the network will increase network resilience and reliability. This will be beneficial for gas consumers.
Attachments	