

# *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	13																
Question date	5/9/13	Answer date	9/9/13																
Submission section question relates to	3.2																		
Topic	Benefits																		
Question	Please estimate the total annual carbon saving (mtonnes/year) from substituting 100 TWh/a of fossil gas with bio-SNG? (It's expressed in % saving terms at present)																		
Notes on question																			
Answer	<p>Using the analysis undertaken by the NNFC (in association with NE Energy Associates), and assuming 100TWh per annum of BioSNG, the saving ranges between 16 and 31.9 million tonnes of carbon dioxide equivalent saved per annum, as shown in the chart below.</p> <p>Residential Greenhouse Gas level for 2012 was 74mtCO<sub>2</sub>eq (heat, power etc.). 100TWh/a would save between 21% and 43% of total residential emissions.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 20px;"> <thead> <tr> <th style="width: 25%;">Methodology</th> <th style="width: 25%;">BioSNG</th> <th style="width: 25%;">Natural Gas</th> <th style="width: 25%;">Total saving at 100TWh pa BioSNG</th> </tr> <tr> <td></td> <td><i>kg CO<sub>2</sub> eq/MWh</i></td> <td><i>kg CO<sub>2</sub> eq/MWh</i></td> <td><i>te CO<sub>2</sub> eq pa</i></td> </tr> </thead> <tbody> <tr> <td>BEAT2</td> <td style="text-align: center;">-68</td> <td style="text-align: center;">+251</td> <td style="text-align: center;">31,900,000</td> </tr> <tr> <td>RED</td> <td style="text-align: center;">+83</td> <td style="text-align: center;">+243</td> <td style="text-align: center;">16,000,000</td> </tr> </tbody> </table>			Methodology	BioSNG	Natural Gas	Total saving at 100TWh pa BioSNG		<i>kg CO<sub>2</sub> eq/MWh</i>	<i>kg CO<sub>2</sub> eq/MWh</i>	<i>te CO<sub>2</sub> eq pa</i>	BEAT2	-68	+251	31,900,000	RED	+83	+243	16,000,000
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Attachments	
Verbal Clarifications  (Consultants )	