

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	4
Question date	15/8/13	Answer date	19/8/13
Submission section question relates to	3.2		
Topic	Business Case		
Question	If 100TWh per annum of BioSNG is unlikely, how much fossil gas could the UK use at lower levels of BioSNG (where the UK continues to meet its obligation to reduce greenhouse gases by 80% by 2050), and how would this affect the projected UK energy system benefits ?		
Notes on question			
Answer	<p>The RESOM model is a total system model and as such changes to inputs have impacts across the whole energy system (power, heat and transport).</p> <p>In the base case with RESOM AUKA scenario there is 710TWh of gas use, of which 569TWh is to CCS plant for power or conversion to hydrogen for industry and transport. The remaining 141TWh of unabated gas goes to heat.</p> <p>Within the 100TWh BioSNG sensitivity there is 756TWh of gas use. 548TWh is to CCS plant for power and conversion to hydrogen. The remaining 208TWh of unabated gas goes to heat.</p> <p>In terms of the impacts to system benefits of lower volumes of BioSNG we have run the following additional sensitivities. It can be seen that the 2030 benefits are not impacted significantly for volumes over 50TWh as the model is choosing to build BioSNG as it becomes available and effectively maxes out its build earlier in the lower volume scenarios.</p>		

	£bn per year			
		2030	2050	
	No BioSNG	185.5	244.5	
	BioSNG producing 25 TWh of gas	184.8	243.8	0.7
	BioSNG producing 50 TWh of gas	184.1	241.0	1.4
	BioSNG producing 75 TWh of gas	184.1	238.5	1.4
	BioSNG producing 100TWh of gas	184.1	236.2	1.4
Attachments				
Verbal Clarifications (Consultants)				