

# *Network Innovation Competition Full Submission*

## *Supplementary Answer Form*

Tick if this answer is Confidential: ☐

Tick if this answer has been provided verbally: ☐

Project code:	NGETEN01	Question Number	11
Question date	20/08/13	Answer date	22/08/13
Submission section question relates to	MSB - Full Submission Pro-forma – Section 3.4, Pages 11/12/13		
Topic	Business Case		
Question	Please describe the current BAU approach to securing demand during SGT maintenance. The scenario considered in the net benefits section suggests that this is the permanent installation of a substation. Can you confirm this or if this assumption is incorrect explain what is done?		
Notes on question			
Answer	<p>National Grid designs and operates the network according to the National Electricity Transmission System Security &amp; Quality of Supply Standards (NETSSQSS). This design standard is based on the N-2 principle for achieving sufficient demand security during Super Grid Transformer (SGT) maintenance, this requires a certain amount of demand (dependent on total size of Group Demand) to be secured in the event of a fault on a second SGT during the planned outage of one SGT.</p> <p>For Group Demand less than 12 MW (group A-C), no demand is required to be secured on N-2. For Group Demand between 60-300MW (group D), the smaller of 'Group Demand minus 100MW' and 'one-third of Group Demand' is to be secured on N-2.</p> <p>For Group Demand between 300 – 1500 MW (group E), the Maintenance Group Demand<sup>#</sup> must be secured on N-2. For demand group F (over 1500 MW), Group Demand* must be secured in the event of the N-2 condition.</p> <p>If that is not possible, then demand is transferred from the GSP substation where the maintenance is being carried out to another GSP which supplies the same customers and can provide the additional capacity.</p>		

	<p>Where demand increases, the above options may not be possible, and some element of the demand may be put at risk by taking a maintenance outage on an SGT. In this case, the network needs to be reinforced. One of the reinforcement possibilities is to add an extra SGT to ensure that demand can be secured if a fault occurs during an outage.</p> <p>* Group Demand – Peak demand during winter peak</p> <p># Maintenance Group Demand – Peak demand during the maintenance period.</p>
Attachments	
Verbal Clarifications (Consultants )	