

LCN Fund Full Submission

Supplementary Answer Form

Tick if this answer is Confidential: ☐

Tick if this answer has been provided verbally: ☐

Project code:	WPDT2003	Question Number	24
Question date	06/10/2011	Answer date	13/10/2011
Submission section question relates to			
Topic	Technical		
Question	Has any modelling been carried out to assess the potential impact on losses due to the use of the battery?		
Notes on question			
Answer	<p>As part of the project bid design we have carried out a high level investigation into the efficiency of the BRISTOL solution. The converters and batteries identified as suitable options during the initial design have been modelled during the different operating modes to identify the worst case efficiency for BRISTOL. Converting AC power to DC, storing in batteries, discharging and converting back to Alternating Current. The modelling estimated the worst case energy efficiency to be 79.5%.</p> <p>During the detailed design stage the overall system efficiency of BRISTOL will be modelled. This model will analyse the use of BRISTOL for different modes of operation including supplying DC power using DC generation, reducing the number of inefficient AC/DC converters. One of the significant learning outcomes is the operation of battery with PV Panels and the practical efficiencies of the solution.</p> <p>In the detailed design stage, after the trial locations have been confirmed the changes in network losses through flatter demand profiles will be modelled and compared with measured trial data.</p>		

Attachments	None
Verbal Clarifications (Consultants)	