

LCN Fund Full Submission

Supplementary Answer Form

Tick if this answer is Confidential: ☐

Tick if this answer has been provided verbally: ☐

Project code:	ENWLT2003	Question Number	3
Question date	25 August 2011	Answer date	31 August 2011
Submission section question relates to	2		
Topic	Power Quality		
Question	Please can you expand upon the comments on page 6 regarding power quality being a key factor in enabling future loads and generation to be connected. Is power quality defined only as harmonics, spikes surges etc, or does it include voltage and current as stated in the first paragraph of page 6?		
Notes on question	n/a		
Answer	<p>The connection of renewable generation (primarily via inverters and other non-linear devices) to the distribution network is known to have an adverse affect on power quality; for example as a result of harmonic distortion being introduced into the network. The C₂C Project aims to investigate the potential benefits of lowering system impedances from the operation of closed HV rings to mitigate these effects. In addition, it is expected that better voltage regulation could be another benefit associated with the operation of closed HV rings, which could help reduce voltage problems often accompanying the connection of windfarms.</p> <p>The full implications of the effects of changes in power quality (through monitoring the voltage and current waveforms) will be studied during the C₂C Project by the academic partners, the Universities of Manchester and Strathclyde.</p>		

Attachments	n/a
Verbal Clarifications (Consultants)	None.