

LCNF Full Submission

Supplementary Answer Form

DNO Name:	WPD	Question Number:	WPD010
Question Date:	17 th Sept 2010	Answer Date:	21 st Sept 2010
Question Topic:			

Original Question No:		Original Answer Date:	
Original Question:			
Original Answer:			

Question:	<p>Why is only voltage being measured? How can this be a credible/useful data without powerflow and tap measurements as well?</p>
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Answer:	<p>Voltage is just one of the measures being taken. The projects aims to establish capacity and voltage "headroom" and to measure power and supply quality characteristics to enable a greater understanding of the impact of low carbon devices on the network (As identified by the Imperial College research work conducted on behalf of the ENA). All inputs required to provide this will be measured. Additional information is provided in Box 14 of our submission.</p> <p>Each HV/LV distribution transformer will be equipped with monitoring and communications that will provide phase power flows, phase voltages, power factor, and harmonic content, and threshold exceedences. The sampling rate proposed will provide values every 10 seconds to provide short time power quality</p>
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	<p>measurement as required.</p> <p>The above data provides capacity headroom and sending end voltage information. The acquisition of voltage monitoring at the LV network ends provides the data that then, in combination with the sending end voltages, enables the high / low voltage performance experienced by Customers to be analysed.</p> <p>There are no automatic tapchangers on the HV/LV transformers, and hence these cannot be monitored. Ground mounted units do however have fixed off circuit tap switches of +/- 2.5 and 5%, whilst pole mounted units normally have under oil bolted links that may only provide the +/- 5% taps. The monitoring of voltage at the LV bar of the HV/LV transformers on the feeder should allow the HV side voltage to be derived using the knowledge of the transformers fixed tap and the load voltage drop across winding. This will provide an HV network profile. WPD already have the capability of monitoring EHV/HV tap change operations via the existing GE Enmac scada system.</p>
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Attachments:	
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