LCNF Full Submission

Supplementary Answer Form

DNO Name:	Central Networks	Question Number:	CN020
Question Date:	16/09/10	Answer Date:	20/09/10
Question Topic:			

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

Question:	It is not clear exactly why the IT system upgrade is required at the proposed scale, and development(?) cost, for the purposes of the trial objectives that have been outlined. How can the £12 million IT spend be justified bearing in mind the scale of the trial?

Answer:	We appreciate that the level of activity required to design, build and operate an IT architecture capable of delivering the Smart Grid capabilities defined in our bid is significant. The capabilities we will develop are covered in Appendix 7 (extract of which is attached to this question). Our costs cover the full term life of the project and ongoing operation up to 2014 including all requisite support, hardware and licenses. Some so called 'smart grids' focus primarily on expanding electrical engineering technologies, however our project is deliberately designed to produce a blueprint smart grid IT solution. The blueprint will be replicable across the UK, and will demonstrate the means to achieve robust, secure and scaleable IT solutions. IT is a fundamental component of smart grid. Our external collaborators have identified how the skills and expertise that they have can add significant value to future networks and UK customers. Their commitment is evidenced by the level of contributions they are making towards the project IT costs.

	We recognise that some software components will have to be developed from scratch. In particular, next generation event processing and visualisation tools will be required. Furthermore, it is essential that the subject of IT security is fully explored and answered within the project, as it is a fundamental pre-requisite to any UK wide smart grid deployment. In line with a DNO's responsibility to fully manage and control its network at all times, the new smart grid architecture has to be sufficiently robust to guarantee safe and continued operation. Our project strikes a balance between expanding existing operational control systems and developing new solutions. We also believe that systems integration will be a critical success factor. It is expected that the smart grid will produce new and large volumes of data never before processed by a DNO. An appropriately sized systems architecture is required to process this data and make use of it for event processing, network analysis and knowledge dissemination. Integrating smart meter data increases the costs but leads to a much richer and detailed appreciation about the network and customer behaviour. The infrastructure required to achieve this should not be underestimated as the complexity of multiple data sources and large data volumes requires serious processing capability. Our IT solution enables the access to structured information generated from operating the smart grid to interested parties and customers. This will further facilitate knowledge management and understanding of the implications of low carbon living. One of the significant value outputs from the investment we are making will be the Low Carbon Intelligent Network Architecture (LCINA) as discussed in question CN009.

Attachments:	Extract from Appendix 7: Appendices_extract of IT sections.pdf