Electricity Network Innovation Competition Full Submission

Supplementary Answer Form

Project: REVISE

Tick if this answer has been provided verbally: ☐

Project code	WPD/EN/NIC/05	Question Number	19
Question date	21 August 2018	Answer date	23 August 2018
Submission section question relates to	Section 4		
Topic	a) Low carbon/environment and net financial benefits; d) Is innovative		
Question	For Method 1, customers would normally opt for the cheapest connection (typically a T) from a cost point-of-view. Why would customer's choose this more complex and costly option and how will the DNO prove that this is the best lifetime cost solution as part of BaU?		
Notes on question	None		
Answer	The ACS Method represents a shift from the current low cost t-connection towards a highly sustainable solution specifically designed to support the transition to greener electricity distribution. The t-connection is not always technically feasible for the connection of new DG (due to network security and protection considerations). This is becoming increasingly common as network complexity increases due to significant numbers of new DG connections. The BAU solution to resolve this issue (as described in Appendix L of the FSP) typically requires a looped-in arrangement which involves the installation of a large traditional substation which is expensive and has a substantial lead time for installation. The ACS, in comparison, will provide a solution which has a significantly lower cost and is much faster to deploy. We agree that the ACS is more complex than the traditional t-connection, however, this complexity is necessary for a network that needs to be more flexible in response to the devices that are connecting to it. Section 6 of the FSP describes how we plan to deliver REVISE and manage the risks associated with developing these complex technologies. We do not believe		

	that the additional complexity of the ACS will negatively affect customers as it will be a DNO asset, managed and operated for the benefit of customers. Our business case for the ACS Method has considered the average DG output that is lost due to the inflexibility of a t-connection. The NPV calculations have shown that the initial capital investment of an ACS is more than recovered by the increased revenue that an average generator would be able to earn over the life-time of the Method. As detailed in Appendix L, through the trials we aim to demonstrate that designing and implementing an ACS will provide: • A far cheaper, more compact and faster to implement solution compared with an alternative that uses current BAU equipment; and • A large increase in DG availability which will save DG operators money and reduce carbon emissions. Following the trial, the ACS will offer customers a proven solution which can be deployed much faster than an equivalent BAU solution whilst significantly improving the availability of their connection, resulting in increased revenue. Our engagement with DG operators has been summarised in Appendix O. One of the main issues for DG operators is the requirement to be curtailed or disconnected for faults, maintenance or construction activities. Following a presentation at the DG operators forum, we received support for the REVISE trials from four different companies (who operate over 2GW of renewable energy on the distribution network). We therefore believe that there is genuine interest in developing a solution such as the ACS.
Attachments	None