Electricity Network Innovation Competition Full Submission

Supplementary Answer Form

Project: WPD Telecoms Templates for a Low Carbon Future

Tick if this answer has been provided verbally: ☐

Project code	WPDNIC001	Question Number	Q5
Question date	08th September 2015	Answer date	11th September 2015
Submission section question relates to	4, Appendix 1		
Topic	Evidence base		
Question	Please provide a more fully articulated evidence base for each of the figures provided in Section 4(b) and Appendix 1 including uncertainty bounds and indications where they are estimates.		
Notes on question			
Answer	4(b) 1. Paragraph 4 '£1,620M' explained in Appendix 1c 2. Paragraph 6 '£17M per across the DNO's areas by 2030' explained below: • The WPD spend on telecoms for 4 license areas in RIIO-ED1 is £45M (2015-2023) {fact} • 100 times more data flows will be required {assumed by considering that similar data flows that are presently expected at primary sites will be going to secondary sites where there are ~100 secondary sites per primary – believed to be conservative}. • Increasing data transfer by factor of 100 will necessitate factor of 10 cost increase {an estimate that assumes significant economy of scale and anticipates lower overall quality of data links to secondary sites} • (£45M / 4 [license areas included in cost]) x 14 [GB license areas] = £158M [RIIO-ED1 GB total spend] • £158M * 10 [increase in cost] = £1,580M [anticipated future cost of		

	comms] • £1,580M / 10 [anticipated saving through implementing TT – conservative] = £158M • £158 / 9 [years from 2021 – 2030] = £17.6M per annum {period selected as that after TT has delivered its findings up to 2030 when improved telecoms infrastructure will be need to be rolled out} Appendix 1 1a. The Benefits Table provided in Appendix 1 gives figures from the Smart Grid Forum work stream 3 'Transform Model' forecast costs for investment in Smart Grid communications. This model provided forecasted costs for an incremental telecoms deployment approach versus a top down, designed and managed, approach. The former has a projected cost for GB rollout of £532M while the latter is projected to cost £119M, a difference of £413M. This is the relative cost across all 14 DNO areas and hence the table in appendix 1 considers it both for a single area and also the 4 areas of the overall WPD franchise region. This shows that investment in a single license area of £8.5M using the approach developed through Telecoms Templates would achieve effective savings (compared to an incremental approach) of £29.51M through the years to 2050. For the WPD franchise, comprising 4 areas, this effective saving becomes £118.05M. Finally, as a cross-check for the method, it can be seen that across the entire GB rollout the final effective saving for this period is again £413.17M. 1c. Calculated from claims given in previous LCNF projects. Comprehensive description given in appendix – it is assumed that the question does not require expansion on this part. It is worth noting that there is the possibility of confusion over the letters used to refer to projects as they are indexed differently in Tables 1.1 and 1.2 (i.e. project Q [FALCON] in Table 1.2 is project M in Table 1.1).
Attachments	