

Questions on cost

	<u>Cost Item</u>	<u>YY</u>	<u>XY</u>	<u>Questions</u>	<u>Response</u>
A	Conductor and fittings/Purchase	7.40	8.03	1. Is this a supply capex cost only? 2. Why are the costs so similar if one conductor is 15.5km and one is 49.5km?	1. This is a capex cost, including 10% overheads, in line with SPT's approach in RIIO-T1 2. The costs for the XY route are higher than the YY route because the XY route is a double circuit and twin bundle, whereas the YY route is single circuit and single bundle. The total conductor length required for the XY and route is 186km and the YY route is 148.5km.
B	Reconductoring	5.24	7.80	3. Is this an install capex cost only? 4. Why is the cost associated with the XY route higher?	3. This is a capex cost, including 10% overheads, in line with SPT's approach in RIIO-T1 4. XY has a higher level of complexity (double circuit in close proximity to live conductors) and a larger amount of conductor to be strung therefore requiring more equipment and more engineers, taking place over two seasons (whereas the YY route will be strung in one season).
C	Civil works	4.86	0.73	5. Explain what civil works are causing the high cost on the YY route	5. The terrain of the YY route is significantly more challenging; requiring extensive building of site access roads to transport equipment and materials.
D	Environmental /wayleaves / legal	0.15	0.66	6. Explain what is included in this category	6. Legal proceedings including land purchase negotiations, environmental assessments, associated with additional space and land owner negotiation
E	Project mgt & design		1.28	7. Explain what is included in this category and specifically if this is a manpower cost 8. Explain if the manpower cost is NGET staff or Contract staff 9. Explain why this category is included in the XY list but not in the YY	7. Detailed design prior to awarding contract and delivery phase construction management 8. These costs are contracted to Iberdrola Engineering and Construction (IEC), in line with SPT's innovative RIIO-T1 approach which, by devolving the traditional EPC model, offers less risk and proven to deliver greater efficiency. 9. Items E, F and G relate to the same elements of detailed design process and the delivery phase project management. These activities would be carried out by the Contractor in an EPC model. SPT's experience is that these costs are lower under our disaggregated contract mode than they would be under an EPC model.
F	Specific ACCR design, modelling, planning	0.91		10. Explain what is included in this category and specifically if this is a manpower cost 11. Explain if the manpower cost is NGET staff or Contract staff 12. Explain why this category is included in the YY list but not in the XY	10. This is the detailed technical design .. The planning stage includes site assessments and sag profile modelling etc. 11. These costs are contracted to IEC in line with the SPT delivery model(see response to question 8 above). 12. We made an assumption YY route that 50% of the design cost would be related to the procurement that formed part of the pre-engineering design, and presented the costs accordingly. As cost items E,F&G encompass the same activities they should be combined for clarity, as indicated below.

G	OHL Design (Project planning, design and management)	0.92		13. Explain what is included in this category and specifically if this is a manpower cost 14. Explain if the manpower cost is NGET staff or Contract staff 15. Explain why this category is included in the YY list but not in the XY	13. Pre-engineering design, surveying and logistical planning of the OHL works. 14. These costs are contracted to IEC (see previous comments) 15. Items E, F and G relate to the same elements of the delivery phase project management and detailed design process
E F G	Detailed design and delivery phase project management	1.83	1.28	(combined E F & G items)	E F G should be combined as they encompass the same overall tasks involved with the detailed design and delivery phase project management
H	Risk	2.16 4	2.41	Discussed below	
I	GIB		1.98	16. Explain what this means and what is included in this cost element. 17. If this is associated with the Chipperlaiggen Tee point please explain why you refer to it as a 'novel busbar system'.	16. This cost refers to the use of a Gas Insulated Busbar (GIB) solution at the Chipperlaiggen Tee point to accommodate the HTLS conductor. 17. Whilst the use of GIB technology is not new, it is not extensively used in the GB Transmission Networks and is considered novel by SPT in that respect. The cost of deploying GIB is not covered by the IRM funding request.
	Total	21.6 4	22.8 8		

Questions on Risk items

The rationale of including a risk element in IRM was to cover potential costs outside of contract and the uncertainties associated with the new conductor. Methodology used in development: have the bottom-up approach and verified the aggregation values by the previous experiences in Overhead Line projects.

Risk item	Question	Response
1. Contract cost – lack of experience with new technology, (YY route currently being tendered)	1. The contract cost quoted above (A) is this an estimate? We understand that there is only one viable manufacturer? Please explain further.	Yes, these costs are estimates. This risk element is to provide a provision to cover the potential contract variation associated with installing the new conductor. The proposed ACCR is the manufactured by 3M and is the conductor tested and type-registered by NGET by the experience of contractors is minimal. The key innovation of the ACCR is the aluminium “matrix core” of the conductor which has been developed by 3M of which they are the sole manufacturers.
2. Additional specialist site supervision required during installation.	2. The reconductoring cost quoted above (B): is this an estimate? Does it include supervision?	This estimated cost accounts for the potential requirement for additional on-site supervision, on top of the planned supervision. Given the significant pressure associated with timely delivery of the project, this risk addresses the uncertainties surrounding the installation of the new technology, and the potential need for additional resources required by the contractor to ensure overruns are avoided.
3. Conductor and fittings cost – currency rates fluctuation	3. Is this because the contract will be placed in US dollars?	Yes. The conductor contract is placed in US dollars. Contractor cost is in GB Pounds.
4. ‘Manufacture only’ approved fittings for high temperature operation and heat dissipation. (Non-standard procurement policy).	4. Is this a contract variation cost? Why is this not included in the contract cost?	Risks 4-8 and 10, relate to uncertainties relating to the installation equipment, fittings and procedures specially required for this conductor. The most vulnerable part of this project is the installation. The supplier 3M has experience overseas, but not in the UK. SPEN may therefore need to procure additional equipment as appropriate. The costs are estimated at this stage, and are already being realised in the early stages of the XY works.
5. Larger diameter installation equipment.	5. Is this equipment purchased or hired? If purchased why is this not in the capex cost element.?	Installation equipment costs have been removed from Risks and reclassified as “Additional hardware and installation costs”, at Ofgem’s request.
6. Specialist tension roller arrays, specifically designed to the conductor system.	6. Same question as 5	
7. Conversion of auxiliary equipment to suit North American sizes.	7. Why is this not included in the installation costs?	

8. Non-standard compression equipment for terminations	8. Same as question 7	
9. Alternative winch positions are required (further from towers compared to standard arrangements, affecting Landowners and requiring larger demarcation areas).	9. What is included here that is not included in the cost element 'Environmental and wayleaves' (D)?	Additional costs due to negotiation and compensation of landowners to accommodate the increased winch positions (further from towers) and the subsequent protection zone, which may fall outside existing wayleaves.
10. Strategic additional components for fault repair and maintenance.	10. You have specifically stated in the note that accompanied the spreadsheet that no costs have been included for maintenances or outages so why is this element included?	This cost item refers to equipment repair during the installation phase (additional OHL, fittings). It does not refer to standard in-service maintenance costs.