

Network Innovation Competition 2020 Supplementary Answer form

Project Name	Retrofit Insulated Cross Arms (RICA)		
Question number	4	Pro forma section	3
Question date	18/08/2020	Answer date	20/08/2020
Question summary	The NPV calculations appears to ignore the cost of outages. Why was this approach adopted?		

Answer (please retain document formatting and do not exceed 2 pages unless otherwise agreed with Ofgem)

In short, we do not believe that a final implementation of RICA will require prohibitively long outages to delivery, and hence have not included conservatism within the Net Present Value (NPV) analysis. However, this is an assumption from the project team and is seen as a technology gap for RICAs. The project will target this technology gap during its delivery, and design RICAs to reduce the required outages to the point where the investment case is clear.

Outages increase costs to consumers in the event that they result in a scenario where the capability of a given transmission boundary is lower than what the daily load profiles require. This results in generation and demand side mechanisms being activated which increase the cost of delivering power to consumers.

For any investment, the required outage plan is a key consideration to ensure that the costs during delivery are kept as low as practically possible. Projects also include return to service plans, which can help the ESO maintain network stability in emergency scenarios.

For RICA, the outages requirements depend on the installation method as highlighted by risk 21 in our risk register and technology gap 7 in Appendix V1. There are currently different options for how RICA can be installed, in what order the work is completed, and how options for quick return to service are maintained or improved. This is a key technology gap which the project will develop collaborative and innovative solutions to.

The project team currently believe that RICAs can be delivered under a single circuit outage, and the outage time can be shortened to minimise the impact on consumers (as discussed in Section 8 of the Bid document). We do not believe the outages time will be drastically differ between RICA and other investment options. This is based on the fact that we currently deliver reconductoring investments under single circuit outages, and the additional time for RICAs is not seen to be prohibitive. The project will validate this assumption during its delivery, as it is a risk that prevents present adoption.

This was the main reason for assuming that RICAs do not require a longer outage time, and hence not including this in the NPV analysis; we have also not included the cost of outages for the counter factual. Given that we have taken a conservative approach to the NPV assessment, we believe that an additional few weeks of outage requirements wouldn't not significantly impact the financial decision to invest, but would decrease the expected benefits.