Q12 Cost

Have you incurred any costs implementing the proposed rollout? How will these costs be funded?

Yes, the reconductoring works for the XY route is at the delivery stage and therefore all design and planning activities have been completed; installation is scheduled to begin in the coming months. The YY route is nearing delivery stage with some aspects of the works currently out for tender. The conductor purchase contract was placed jointly to maximise the savings achieved by economies of scale.

The expenditure thus far has been funded through the Baseline Shared Infrastructure allowance (Licence Condition 6F).

Q13 Needs case

Please can you explain the impact of the Governments announcement to end the Renewables Obligation a year early will have on the requirement to rollout the proposed proven innovation.

In the RIIO-T1 period we anticipated the connection of 2,500MW of renewable energy and we are still on target to achieve this. We do not anticipate the early termination of the RO to significant impact the RIIO-T1 targets for SPT. The need for the uprating of the XY and YY is undoubtable and given the need is driven by consented generation connections.

A proportion of the generation further afield, particularly that driving the SWS Project, is currently within the consenting stage. As set out in the application, a key advantage of the reconductoring is the improved ability to manage such uncertainties and avoiding the need for major tower works. The impact of external factors on network investment is a supporting factor behind the business case for the implementation of HTLS technology. The recent policy change in fact emphasises the business case behind the introduction of high-capacity conductors in managing network reinforcement.

In the Mark Hill area, where the YY route uprating is required, we have 176MW already connected (Mark Hill and Arecleoch wind farms) and 278MW in construction (Kilgallioch wind farm), and another 32MW consented, which gives 486MW, equivalent to 512MVA. Add to this imports from Northern Ireland, which from 2018 contracted to 80MW, this will result on loading well above the current summer pre-fault rating of 505MVA for the YY route. Note that a further 97MVA is contracted to connect to Mark Hill (Tralorg and Stranoch wind farms) however current understanding is that these have not been consented yet. Hence the uprating of the YY route to new HTLS conductor will be required by the end of 2017 to meet the connected and consented position.

For the circuits between Coylton and Kilmarnock South, the XY route, This will harvest generation from Mark Hill, South West Scotland, Coylton and Maybole areas. Currently a total of 335MW is connected to these locations with a further 328MW consented to connect. This gives a total of 698MVA of renewable generation. Add to this the imports from Northern Ireland, which from 2018 contracted to 80MW, this will result on loading well above the cable section pre-fault summer rating of the circuit, 655MVA, or the Overhead line rating, 640MVA. There is a further 1306MVA of renewable generation contracted at these locations, where current understanding is they are not consented, and in excess of 400MW in live offers. Hence the uprating of the XY route will be

required from the end of 2016 to meet contracted and consented position. A conventional conductor will only provide at the most 200MVA of additional capacity which is well short of the contracted position of 1306MVA. Hence the uprating of the XY route to new HTLS will be required if only 20% of the contracted 1306MVA progress to connect to the system.

Q14 Outputs

Please propose relevant outputs or other end products against which the Roll-out will be assessed. This is a requirement of 6E.12(f) and it is not clear from your submission where outputs or other end products are proposed.

The output of the proposed IRM project will ultimately be the successful installation and operation of the ACCR HTLS technology. The project's success will be assessed based on primarily on the overall HTLS scheme costs in comparison with BaU, taking into account the costs associated to deploying the new technology on the network, but must also consider the repeatability based on the initial experience of the ACCR technology.

The project will be considered a success if the technology is installed and operated on the live network. The eventual cost of the roll-out will be used to assess the actual cost benefit once the true costs of HTLS reconductoring are known.

Q15 Price basis

In which years prices are the figures referenced in the written submission and CBA presented?

They costs in the submission are based on current 2015/16 prices.

Q16 Previous funding [confidential]

The submission states that "The initial allowance of £17.4m for the XY route, as part of the SWS Project, allocated £12.7m to the OHL element using AAAC (Rubus), delivering 1,020MVA per circuit." Within SP Transmission's licence, the SWS TIRG project has a total allowance of £42.5m (09/10 prices) that is not broken down by the different technical aspects of the project. Please explain how the values of £17.4m and £12.7m have been reached by SP?

[redacted]

Q17 SWS project

Please explain what the impact on the delivery of the SWS project will be, both in terms of additional time incurred and expected final overall costs incurred against the £42.5m (09/10 prices) allowed by the licence as a result of the change in conductor type to HTLS.

As mentioned above, the £42.5 refers to the SWS TIRG project and therefore the proposed reconductoring will not impact the timescales or costs of the project.