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Kersti Berge Partner, Electricity Transmission Ofgem 9 Millbank London SW1P 3GE

Date: 28 May 2014

Dear Kersti,

Consultation on Scottish Hydro Electric Transmission's proposed transmission project between Caithness and Moray

Thank you for the opportunity to respond to Ofgem's recent consultation on our proposed strategic wider works (SSW) transmission project between Caithness and Moray in northern Scotland.

As requested in the consultation we have, separately, provided further information on the costs and timing of the onshore reinforcement options and given consideration to Poyry's approach to constraint modelling. We have also commented on the optionality of a 'wait and see' approach to the onshore reinforcement south of Beauly. A high level summary of the additional information provided to Ofgem is attached at Annex A. It has been redacted to remove commercially sensitive information.

As a consequence of carrying out further work to improve the accuracy of costs and update our modelling approach, our updated cost benefit analysis shows a strong net benefit to consumers of over £2.5 billion for our HVDC subsea route, some 11% higher than the alternative onshore AC route.

We continue to believe that the HVDC subsea route is the best option for meeting the needs of renewable generation connection in the north of Scotland. The project is at a high state of readiness; all planning consents have been granted and key supply chain contracts agreed. The project has strong stakeholder support and, assuming timely approvals from Ofgem, project completion is forecast for 2018 allowing for the connection of up to 1.5GW of renewable generation.

Further to this, we have the following comments to make on Ofgem's, and its consultants', initial assessment of our needs case submission.



In its consultation, Ofgem refers to the proposed subsea link including anticipatory investment to accommodate a future cable link from Shetland. In our needs case submission we made it clear that Shetland is only one of a number of potential future connections that justify the anticipatory investment.

With regards to the costs of our proposed solution, Ofgem has noted that we '... incorrectly include costs for equipment that is not associated with this particular option [2a].' We have included these costs, for Blackhillock substation and the Static VAr Convertors, to ensure a like for like comparison. Under this approach Options 1b & 2b are then simply the addition of the Beauly to Blackhillock 400kV upgrade to both Options 1a and 2a.

Ofgem has expressed concern about the high cost estimates for the subsea link. We have therefore carried out our own benchmarking exercise and commissioned an independent review of our costs; both submitted as part of the additional information discussed above. The overall cost for HVDC is within 10% of the independent reviewer's global database.

With regards to the risks around the different options, whilst we agree that supply chain, technology and build risks to exist with the HVDC subsea solution, we do not believe that the potential impact is 'significant'. With regard to the supply chain, as noted by Ofgem, we have now moved to preferred bidder status and expect to place the main contracts at the end of July. Multi terminal HVDC technology is new to the UK, but not internationally and offshore build is not new to either us or our preferred supplier. We have assessed and mitigated potential risks through our, industry standard, risk evaluation process. We have provided evidence of this to Ofgem as part of the update to our needs case submission.

Moving on to potential wider benefits, Ofgem has noted that as the onshore options that make up overhead line solution are not expected to be new lines but upgrades to existing lines, the visual impact is likely to be lower in net terms compared to a new line in a new location. This is not correct; the 275kV upgrade will be a new line, with larger towers and hence significant additional impact on visual amenity. We have separately provided Ofgem with further information on the impact of visual amenity on the onshore route.

We hope these comments are useful in taking forward the Caithness Moray Needs Case. Please contact me directly if any further information is required.

Yours sincerely,

Malcolm J. Burns Senior Regulation Manager