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Dear James

Orkney transmission project: Consultation on Final Needs Case and Delivery Model

This response is from SP Transmission (SPT), the onshore transmission owner (TO) for the South of Scotland. As a TO, we have a duty to ensure that we develop and maintain an economic, efficient and coordinated onshore transmission system. We therefore welcome the opportunity to share our views on the Final Needs Case and delivery model for SHE-T's 220MW subsea cable between Orkney and the mainland.

We agree with Ofgem's decision that the Orkney project meets the competition criteria of new, separable and high value (i.e. > £100m capital expenditure). We also agree that Ofgem should approve the Final Needs Case for this transmission connection, given its necessity to unlock considerable renewable energy potential on the island of Orkney. However, we cannot agree with Ofgem's decision that this strategic infrastructure project should be delivered under Ofgem's new Competition Proxy Model (CPM) framework.

SPT continues to hold the view that the proposed CPM delivery model is unlawful, unworkable in practice and in no way delivers the stated aim of extending competition across the GB onshore transmission system. We are concerned that Ofgem has developed CPM through National Grid Electricity Transmission's (NGET) Hinkley Seabank project and has not yet fully thought through the content and effect of the policy more generally. In particular, Ofgem does not appear to have considered the significant negative effects which re-opening the RIIO-T1 in this way will have on regulatory certainty and investor confidence, has not yet developed a consistent and coherent CPM methodology and has not addressed how its CPM policy could be effectively integrated into TO licences¹.

However, in the absence of a fully tested and justified standalone CPM policy, this mechanism is now being used to support other strategic infrastructure projects, such as the Orkney project, with little understanding of the scope of this new mechanism and how it will interact with the current, or future, price control frameworks.

We therefore consider that Ofgem should do what it originally said it would do during RIIO-1 and approve the Orkney project for delivery under the RIIO Strategic Wider Works (SWW) delivery model. The SWW framework is the mechanism specifically designed to support large scale strategic infrastructure investments, such as this Orkney project, under the current price control framework.

We note that SHE-T intends to start construction of the Orkney project in 2020, ending in October 2022. In light of the ongoing work to develop licence conditions to introduce the CPM delivery model, it will be important to investors, generators and communities alike, that the development of this new

¹ We have written to Ofgem a number of times in relation to its CPM policy generally. In this letter we focus on the particular questions which Ofgem has posed in relation to the Orkney project, but would refer to all previous correspondence in relation to the principle and application of CPM.

'competition' model does not complicate or delay the delivery plans for strategic transmission infrastructure.

We question the proposed £12 - £25m savings to consumers for this project, as a project specific impact assessment and cost benefit analysis has not been undertaken, and consulted upon, for delivery of the Orkney project under the CPM framework. Those impact assessments and other analysis which Ofgem has published to date for CPM are fundamentally incomplete and inaccurate. Amongst other things, for example, they do not weigh up the likely costs of increased regulatory uncertainty which Ofgem's proposals create.

If Ofgem intends to deliver strategic infrastructure projects, under their new 'competition' models, then a project specific impact assessment and cost benefit analysis should be undertaken, in advance of Ofgem taking a decision on the 'competition' model to be adopted. Such assessments are fundamental in helping to ensure that all options, including 'the status quo RIIO SWW delivery arrangements' can be properly weighed up, before Ofgem takes a decision on the model to be used, which delivers actual benefits to consumers². In the absence of such an assessment, we would also ask that Ofgem set out, in further detail, as to how the proposed £12 - £25m consumer savings figures have been reached.

We remain strongly of the view that Ofgem should focus its attention and resources on the existing tools and framework. There is still a lot for Ofgem to do for the future RIIO-2 price control, engaging directly with key stakeholders as to how it intends to effectively facilitate true competition across this future framework, balancing the long-terms interests of investors and consumers alike.

Should you have any questions in relation to this response, please do not hesitate to contact me.

Yours sincerely



Lynne Bryceland
Transmission Policy and Licence Manager

² Ofgem committed to considering those status quo arrangements on p.3 of its 14 September 2018 letter 'Update on Extending Competition in Transmission' at page 3.

ANNEX

Orkney transmission project: Consultation on Final Needs Case and Delivery Model **SP Transmission's response to consultation questions**

Q1: Do you agree that the current network on Orkney needs reinforcing in order to connect additional generation?

We understand that:

- (i) Orkney is currently connected to the mainland via two 33kV cable circuits, which provide an export capacity in the region of 40MW;
- (ii) An Active Network Management (ANM) system has been developed and deployed to facilitate the connection and management of 75MW of existing renewable generation; and
- (iii) Due to the limitations of the existing system, no further generation connections can be accommodated at this time.

We would therefore agree that the current network needs to be reinforced, in order to facilitate the economic integration of additional renewable generation located on, and around, the Orkney islands.

Q2: What are your views on the generation scenarios developed by SHE-T? We are particularly interested in views on the likelihood of wind generation progressing without subsidy support and the likelihood of tidal generation around Orkney developing to the levels predicted by SHE-T's scenarios.

SPT does not have sufficient knowledge of the specific projects proposed to connect in this region to respond to this question.

Q3: What are your views on the technical design and costs of the proposed Orkney link?

The proposed Orkney link is based on the use of 220kV subsea cable technology, similar to that used on the joint SHE-T/ SPT Kintyre–Hunterston project, which was commissioned in 2015/16. SHE-T is therefore well placed to understand the capability, costs and risks associated with the design, development and delivery of a project of this nature.

We also note that the proposed scheme seeks to deliver an infrastructure solution appropriate for the prevailing level of generation activity, while incorporating a future development path (in the form of a second 220kV circuit). With a view to managing the risk of higher levels of generation seeking connection in the longer term, as may be the case should tidal generation technology continue to mature and ultimately be brought forward at scale.

Q4: Do you agree with our concerns that a constraints-based CBA may not robustly demonstrate the true consumer cost/benefit of a radial extension to the transmission network?

Renewables in Scotland are often built in areas that are considered harder to reach. Therefore, connections are consequently radial extensions to the transmission network. Given existing legislative and system requirements, it is important that any economic analysis does not ignore the mandated future renewable and climate change targets and inadvertently creates a barrier to entry for developers.

We recognise how important it is that, as a transmission owner, we help facilitate low carbon generation, in line with Government policy. We consider any signal that the cost of the transmission of

renewable energy, which will not be directly connected to the Main Interconnected Transmission System (MITS), is of no benefit, would be contrary to Government policy. We believe this would create a significant barrier to entry for developers due to the practicalities and limitations arising from the location of wind farm sites. It would also drive an increase in the cost of reinforcement of the MITS, where access for large scale works of this nature would be limited, due to a physically and geographically inhibited system. We would be concerned that the outages required for such works would not be available, and when they are, would result in incremental constraint costs. We therefore consider it important that constraint costs are taken into consideration in CBAs for projects such as Orkney which will facilitate significant levels of renewable generation in the future.

Q5: What are your views on the ‘additional CBA’, outlined in this chapter, which has been used to sense check the results of the original constraints-based CBA?

The concept of the additional CBA is novel but as Ofgem states, it is *“highly sensitive to differing input assumptions”* therefore as an analysis tool it would seem to have some critical limitations which in turn must question confidence in the output. In particular it is noted that the some of the certainty on the BEIS Remote Island Wind (RIW) Contract for Difference (CfD) prices that have been used are immediately questioned and viewed as unlikely. Therefore, using an input with such volatility, simply undermines the result provided. SPT are supportive of innovative approaches in understanding and analysing benefits cases, but would be cautious about any methodology that may be counterproductive to the delivery of renewable energy in an area that clearly has significant potential.

Recognising the transformation which has taken place in the generation background across Scotland and Great Britain in recent years, we are also surprised by the view which has led to potential carbon savings not being recognised within the ‘additional CBA’.

Q6: What are your views on our proposed conditions of approval? Specifically:

i. Do you agree with our view that the information available does not demonstrate that building a 220MW connection to Orkney would be beneficial for GB consumers if only 70MW of generation came forward to use the link? Do you agree with our proposal to set a minimum-generation threshold of 135MW?

ii. Do you agree that the fact of a generator signing up to SHE-T’s ‘Alternative Approach’ does not provide an adequate level of certainty that the generator will progress to full commissioning?

We answer the preceding 2 questions in tandem below.

There is an element of circularity with respect to the investment decision from both developers and SHE-T which is essentially a tension between ‘build it and they will come’ and ‘no renewable export ability = no renewable investment’. As acknowledged by Ofgem, *“the current network on Orkney is unable to accommodate any new generation meaning that reinforcements to the network on and around Orkney would be required to connect any new generation there”*. The solution to this problem, and the apparent circuitousness that co-exists with it, will not be broken without risk to either a developer or the TO (and ultimately the UK consumer). With ambitious legislative targets on renewables and climate change already in place, it is critical that this conundrum is approached with the goal of unlocking the renewable potential of Orkney and the risk allocated to the parties, best placed to manage those risks.

It is difficult to predict that the Alternative Approach will ensure the level of required developer commitment to progress or not. What is clear from the Alternative Approach is that the problem of

encouraging generation investment in renewables in Orkney requires a different and non-standard “signalling” approach, and absent of any other proposal or incentive for generators to commit (and take the risk of their own assets being either stranded or heavily constrained) then this approach seeks to balance off some of the investment risk in a pragmatic fashion (in particular the proposal on adjusted securities). That said, the Alternative Approach should be best viewed through this “signalling” lens, but does lend itself to be more of a management tool where the contracted position is more certain. It is perhaps ideally designed for a situation where generators are in a firmer position with their own investment plans (i.e. a route to market has been established). The risks then faced in completion of these renewable projects (planning, consents and construction) should then be capable of being managed by a developer.

What remains to be confirmed before this, however, is the degree of confidence and associated risk that either a developer or a transmission owner have in each other to justify a corresponding and corollary investment. Given this, perhaps a more traditional approach is required akin to onshore transmission investment, with the Alternative Approach being used to supplement, manage and monitor the transmission assets rate of development and construction. In simple terms, we consider that the developer should have a mature Business Plan (with details on CfD status/route to market and investment backing) and be in a position where consents and planning are at a sufficiently progressed stage such that these facilitators to the project can be analysed and give the degree of confidence to SHE-T, Ofgem and the UK consumer that at the required time, a “proceed” or “don’t proceed” decision can be made.

Whilst we note Ofgem’s information presented on the future scale and timing of renewable generation in Orkney, we do consider that some of the examples provided are symptomatic of the status quo challenges and are representative of the tasks that need to be progressed with the appropriate level of confidence. It would seem perverse to identify a rich source of renewable energy and discount it completely due to the presently imposed industry arrangements, which does seem to confirm a different approach is required here.

We also consider that a wide range of stakeholders, including Orkney’s local authority, community councils, Crown Estate Scotland and technology providers should give a firm view on this consultation, and where possible give a positive signal to this type of investment in renewables and associated infrastructure investment.

iii. Do you agree that the award of a CfD to a generator would provide an adequate level of certainty that the generator will progress to full commissioning?

Yes, we would agree that the award of a CfD to a generator offers sufficient certainty that the generator will progress to full commissioning, particularly as the forthcoming CfD round in Spring 2019, which allows RIW to complete for Pot 2 funding, is the result of a Government policy which recognises the benefits of projects on remote islands (including Orkney).

iv. Do you agree that, in the absence of a CfD, a generator securing planning consent and finance to construct a project is a good indicator of a project’s likelihood of progressing to commissioning?

We agree that other factors such as planning consent and project finance may also be instructive of a project’s likelihood to proceed. We would suggest that there may be scope for considering a weighting element when determining the likelihood of progress, is also considering that project financing could be arranged on a “proceed” or “don’t proceed” basis and investors becoming reluctant to examine potential projects because they have a singular “signal”.

v. If you answered no to questions (iii) and (iv) above, can you propose any alternative ways to assess, to an adequate level of certainty, whether a generation project will progress to commissioning?

N/A

Q7. Do you agree with our assessment of the Orkney project against the criteria for competition?

Yes, we agree with Ofgem's assessment that the Orkney project meets the criteria for competition of new, separable and high value (> £100m capital expenditure).

Q8. Do you agree with our proposal not to competitively tender the Orkney project using the SPV model or under our CATO framework unless there are significant delays to the delivery timescales?

It is important that the introduction of new competition models, does not lead to delays to the delivery of large scale transmission projects. As we set out in our response to Ofgem's September 2018 SPV consultation, we do not consider the SPV model to be lawful, practical or cost effective. We therefore agree that the Orkney project cannot be delivered under it. Further, as the relevant legislation which Ofgem has said it requires for the CATO model is not in place, the Orkney project cannot be subjected to this delivery model.

However, it does not follow that the Orkney project should be delivered under CPM. For the reasons set out in our cover letter, we also consider the CPM delivery model to be unlawful, unworkable in practice and fails to deliver the stated aim of extending competition across the GB onshore transmission system.

Q9. Do you agree that the Competition Proxy Model would deliver a favourable outcome for consumers relative to the existing SWW delivery arrangements?

We do not agree that CPM will deliver favourable outcomes for consumers relative to the existing SWW delivery arrangements. As we have repeatedly argued and elaborate in our cover letter, CPM is neither competition nor lawful nor efficient regulation.

We question the proposed £12 - £25m savings to consumers for this project, as a project specific impact assessment and cost benefit analysis has not been undertaken, and consulted upon, for delivery of the Orkney project under the CPM framework. We continue to be of the view that if Ofgem intends to deliver strategic infrastructure projects, under their new 'competition' models, then a project specific impact assessment and cost benefit analysis should be undertaken, in advance of Ofgem deciding on the 'competition' model to be adopted.

We would ask that Ofgem set out, in further detail, as to how the proposed £12 - £25m consumer savings figures have been derived. We also ask Ofgem to fully address the various concerns with its proposed CPM policy which we and others have raised to date.

Q10. What are your views on the way in which we have applied project specific updates to the Competition Proxy Model methodology to account for the specific characteristics of the Orkney project?

As per our earlier correspondence to Ofgem on CPM, SPT continues to hold the view that the proposed CPM delivery model is unlawful, unworkable in practice and in no way delivers the stated aim of extending competition across the GB onshore transmission system. We consider that the CPM methodology is flawed, in particular as it uses inaccurate and inconsistent cost of capital assumptions.

We set out our views on Ofgem's project specific updates to the CMP methodology for Orkney, below:

Benchmark for Cost of Debt during construction

We are not supportive of Ofgem's decision to use the A-rated iBoxx GBP corporate index with 1-3 years maturity as the benchmark for the bottom end of their cost of debt range during construction. The utilisation of this index risks understating the cost of debt allowance as it does not adequately reflect the construction risk related to the Orkney project.

For HSB, Ofgem and CEPA both accepted that the A-rated credit rating assumption for the project under the CPM deliver model would be challenging, and therefore, revised their approach to instead rely on only the BBB iBoxx 5-7yr index, as this better reflected the additional risks associated with the project during construction and was supported by precedent (e.g. Thames Tideway Tunnel, PNG and Firmus cost of debt allowance is based on BBB). Ofgem utilise an A-rated benchmark due to their perception that the Orkney project is exposed to similar levels of risk, technology and construction challenges as those faced by offshore transmission connections. However it appears to be inconsistent for Ofgem to then assume that the Orkney project could achieve a higher credit quality than HSB during construction, given Ofgem's acceptance that the Orkney project reflects greater capex risk due to their acknowledgement in their beta assessment that the construction of an offshore transmission asset like Orkney would face additional marine-based construction risks that are not applicable to onshore construction work. In this regard, we consider that the BBB credit rating applied to HSB and comparable projects would be a rational starting point for the Orkney project.

Additionally, as outlined in more detail below, the omission of allowed cash-flows during Orkney's construction to recover debt cost will negatively affect credit metrics and would thus have a detrimental effect on the project's credit profile, further limiting the project being able to achieve an A credit rating. For the above reasons there is no apparent basis on which Ofgem is proposing to assume a better credit quality for Orkney relative to HSB. We are therefore of the opinion that it would be more appropriate to assess the cost of debt allowance for Orkney with reference to a BBB-rated benchmark only.

We do not support the use of a 1-3 year debt tenor index as a relevant benchmark for the lower bound of the Orkney project, as utilising this index would risk setting the cost of debt at a level which fails to compensate efficiently incurred debt financing. The assumption that the 3 year construction period is a reasonable estimate of the expected period over which construction debt will have to be raised is unlikely. It is more plausible that SHE-T will need to raise debt for a period of time that extends beyond the project's assumed 3 year construction period. Firstly, debt for such a project will need to be raised in advance of the project's construction. In turn this would give rise to substantively greater costs of carry than Ofgem appear to be allowing. Also, given the additional risks related to offshore marine-based construction, as acknowledged in Ofgem's beta assessment, it is credible that there is a higher degree of right-side tail risk around the project's completion date.

For these reasons it is sensible to assume that the average construction period of Orkney, and over how long debt is raised, would be closer to 4 years and Ofgem should therefore provide for an allowance based on a longer 3-5 year tenor index. This would better represent the financing costs that SHE-T would incur over this period.

The shorter assumed tenor of the project also has implications for transaction costs, which will also need to be recovered over a shorter time period compared to HSB.

Uplift to the Beta

Although we recognise Ofgem's inclusion of an uplift to the upper end of the asset beta for the Orkney project relative to HSB, as this decision recognises the project's exposure to additional specific risks associated with marine-based construction, we find that the approach employed by Ofgem to determine the uplift for Orkney is unsuitable for the asset under question.

The rationale for the uplift on the high end of the CPM construction asset beta is the recognition that the specific challenges during construction in a marine environment are not faced by the representative onshore construction and engineering comparators used in the CPM asset beta estimation. Ofgem consider that the uplift applied to OFTO and Interconnectors relative to HSB is consistent with the Orkney project. The scale of this uplift is determined by CEPA on a purely qualitative basis through a relative risk assessment during the construction phase between CPM and the two offshore transmission regimes.

We believe that Ofgem's arbitrary uplift is based on an inherently subjective risk analysis between the various transmission regimes and the inclusion of this premium to account for marine construction risk has not been evidenced enough by CEPA to align with actual experience and that a different, more objective approach should instead be adopted for Orkney. CEPA even acknowledge in their July HSB report that if future offshore assets were to proceed under the Competition Proxy model, the analysis on setting the asset risk may need to be reviewed.³ We therefore recommend that Ofgem reconsider their commitment to this approach and examine alternative approaches⁴ that lead to greater objectivity in determining the risk differentiation between transmission regimes in order to ensure that the project specific risks associated with Orkney are adequately compensated for. Most obviously, it will be important to recognise that all OFTOs to date have taken on already built assets and so carry no construction risk. However, as CEPA have recognised, it is important that Ofgem's decisions are based on robust evidence as to the relative risks which are being financed.

Additionally, as highlight in our HSB response, we find that the lower bound of the range of the asset beta is understated due to the reliance on evidence from energy network companies. CEPA's evidence for the lower bound of the HSB asset beta range was based on the estimates from allowed asset beta for Scottish TOs at the RIIO-T1 price decision. We question the basis on which Ofgem would exclude construction and engineering comparators, which undertake similar activities to that of a TO, from any assessment of CPM construction phase cost of capital.

Revenue during construction

We are not supportive of Ofgem's decision on the removal of the allowance for revenues during the construction phase to recover debt cost of the Orkney project as its removal could impact on the financeability of the project on a standalone basis. The lack of interventions to reduce cash-flow limitations during construction could affect SHE-T's capacity to service the debt raised upfront and hence would limit the ability of achieving credit metrics that would ensure a stable investment grade credit rating, thereby increasing financing costs of the project and ultimately costs to customers.

³ Footnote 45, CEPA

⁴ CAA adopted a different approach when considering asymmetric risk with Heathrow Terminal 5 -> potentially highlights this different methodology.