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Dear David,

Indicative Transfer Value for the Race Bank project

Introduction

The Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2015 ('the Tender Regulations') provide the legal framework for the process that Ofgem runs for the grant of offshore electricity transmission licences. Regulation 4 of the Tender Regulations sets out the requirement for the Authority to calculate, based on all relevant information available to it, the economic and efficient costs which ought to be, or ought to have been, incurred in connection with the development and construction of the transmission assets. This process for calculating the economic and efficient costs includes a number of stages, starting with our confirmation of the initial transfer value, progressing to the indicative transfer value ('ITV'), and culminating in our determination of the final transfer value ('FTV') for a project.

We wrote to you on 13 September 2016, confirming that the £530.4m forecast of costs provided to us on 30 June 2016, for the development and construction (including financing) of the Race Bank Offshore Wind Farm¹ transmission project ('the Project'), would be taken as its initial transfer value. This value was included in the enhanced prequalification ('EPQ') document and the preliminary information memorandum for the commencement of the EPQ stage for the Project.

Race Bank Wind Farm Ltd (the "Developer"), submitted a revised cost assessment template ('CAT') for the Project on 27 March 2017 indicating a cost of £539.5m. We have now completed the review and analysis of that CAT and the supporting information the Developer provided to calculate the ITV.

The ITV is an estimate of the economic and efficient costs that ought to be incurred in connection with the development and construction of the transmission assets for the Project. This letter sets out:

- an overview of the work that has been undertaken to inform our calculation of the ITV;
- our conclusion that £500.9m is the ITV for the Project; and

¹ Dong Energy (50%), Macquarie European Infrastructure Fund 5 (25%), Macquarie Group Limited (12.5%) and Sumitomo Corporation (12.5%) indirectly own the wind farm.

• the next steps in the cost assessment process.

Overview of work to inform the calculation of ITV

We have engaged extensively with the Developer to understand the cost data and supporting information, and used these discussions to inform our view of what constitutes the economic and efficient cost for the development and construction of the Race Bank transmission assets. We have set the ITV based on:

- a forensic accounting review of the cost submissions;
- additional information provided by the Developer to substantiate costs; and
- our estimate of the allocation and efficiency of costs across relevant cost categories.

The following sections detail the outcome of the forensic review and our considerations of what constitutes efficient costs in each of the cost categories within the CAT.

Findings of the forensic review

We employed independent consultants Grant Thornton (GT) to undertake a forensic accounting investigation in order to inform our calculation of the ITV. GT checked the accuracy and completeness of the Project's revised CAT; in particular, matching reported CAPEX costs to contract documentation. We have shared and discussed the report on the findings of GT investigation in detail with the Project team.

Inaccuracies

GT's report found various inaccuracies in the CAT submission, which resulted in a number of cost increases and decreases. The net result of GT's review is an increase to the submission of ± 1.57 m to the ITV, which was agreed with the Developer.

We have accepted this recommendation and incorporated the adjustments in the ITV.

Unsubstantiated costs

GT was tasked with ensuring traceability of both the contracted costs and estimates of future costs. They identified \pounds 40.4m of costs where justification of the value of the estimate was insufficient.

We note that some of the future cost estimates included in the CAT are particularly significant values. We have received further information from the Developer to explain some of these costs. However, more time is required to subject the information to proper scrutiny.

We have removed ± 0.3 m of unsubstantiated costs from the ITV but have included the remaining ± 40.1 m with the understanding that the justification for these costs will be further investigated during the FTV stage. Substantiated

Centrica Acquisition

The Developer acquired ROW01 Offshore Wind Farm (including the transmission project) from Centrica Plc in 2013 and allocated part of the cost to the transmission assets. GT was tasked with verifying that the cost of the acquisition did not include any elements of goodwill or profit on the transmission project, and that the proportion of costs allocated to the transmission assets was reasonable. We concluded that the asset value of the acquisition and the allocation rate could not be substantiated and further information would be required to fully verify this.

For the ITV we have acknowledged the acquisition cost as the basis of the calculation to allocate a proportion of the acquisition costs to the transmission assets. However, we note that work is still required to confirm that this cost is based on the asset value only. We will continue this investigation at the FTV stage. Our views on the proposed allocation rate used to apportion some of this cost to the transmission assets are provided below.

Contingency

GT found that the level of contingency (£12.7m), as a proportion of total costs, was reasonable. However, the basis of the contingency calculation is usually the risk register provided by the Developer. In this case, the Developer declined to share the full risk register and only provided the top ten risks. GT concluded that it was unable to substantiate the basis of the contingency calculation and the monetary values provided.

We do not approve of the Developer's decision to withhold the full risk register. For future projects, we would expect this to be provided. However, given that in this instance the contingency amount is in line with that allowed for previous projects, we have included this cost in the ITV. It will be scrutinised further at FTV where we expect the Developer to provide full transparency around risk mitigation activities so we can assess how the contingency may have been used.

Findings of Ofgem's review

Our letter, on 13 September 2016, set out views regarding the CAPEX elements of the Project's costs and explained how we would take this forward. We recognise that the costs submitted at the initial transfer value stage were best estimates of the costs at that time. As the Project has progressed, these cost estimates have now become firmer, and a significant proportion of the projected costs have been incurred. We have used the 27 March 2017, revised CAT submission, that reflects this updated position, as the basis of our analysis. We have set out our findings in two sections below: one section on crosscutting issues, and the other on our assessment of individual cost categories.

Crosscutting issues

In reviewing the individual cost categories, there were some crosscutting issues, which we discuss here.

Reallocation of Elements of Common Cost and DTS equipment costs

During our assessment of the Project we use benchmarking to 'sign-post' which cost categories require further investigation. To ensure the costs included in each of the Project's cost categories are consistent with previously assessed projects, we reallocated costs in the CAT as follows:

- Movement of the Digital Temperature Sensing equipment costs from the Onshore Cable to the Offshore Substation (67%) and the Onshore Substation (33%)
- Movement of Landowner agreements from the Development/CR8 category to the Onshore Cable
- Movement of Jack-up accommodation vessel from the Development/CR8 category to the Offshore Substation

Following the reallocation of costs, the Project's cost were benchmarked against previous projects in respect of different cost categories. The analysis indicated that subsea cable installation, offshore substation and common costs were benchmarking higher than expected.

Shared Costs Allocation Methodology

The Developer has used a number of different allocation methodologies to apportion shared costs to the transmission assets. The effective allocation rates used by the Developer give an average rate of 35.4%. GT and Ofgem noted that this rate is higher than rates we have seen on other projects. We expect the allocation methodology to follow the transmission to generation direct capex ratio, as other projects have done in the past, unless project-specific evidence-based justification is provided.

The Developer claims that this allocation methodology is not realistic and that the allocation methodology it has adopted for this project is more reflective of the true transmission asset costs. Ofgem has considered this but we have not seen evidence that the allocations arising from these methodologies are robust and traceable. Therefore, we

have reverted to an allocation methodology based on the transmission to generation direct capex ratio.

For the purposes of establishing the ITV, we have agreed with the Developer the proportion of direct capex associated with the transmission assets compared to the total wind farm direct capex. The impact of applying this proportion is a reduction of £20.9m from the Race Bank ITV. This arises from three cost items: a reduction of £0.7m from 'shared capex', a reduction of £5.1m from 'Devex' and a reduction of £15.1m from 'Acquisition costs' in CR8 (Common costs).

Project management

The total value of project management excludes any project management included in the Devex and Centrica Acquisition categories in CR8 (Common costs). The Developer claimed that their multi-contracting approach for this project would result in a higher project management cost but that this would be offset by a lower capital expenditure. We agreed to consider this.

Our analysis has not found evidence that the higher project management costs are offset by lower capital costs, once existing risk estimates are incorporated. However, we acknowledge that there has been insufficient time for both the Developer and ourselves to discuss the issues in respect of the efficient level of project management costs. For the purposes of establishing an ITV, we have adopted a position whereby the shared project management costs are allocated to the OFTO assets at a uniform rate based on shared costs allocation methodology described above, rather than the range of different rates proposed by the Developer's allocation methodology. This results in a reduction of \pounds 8.1m from the CR8 project management costs submission, as compared to a higher reduction if we had adopted a 10% cap. We will revisit this issue at the FTV stage.

Forex

Ofgem expects developers to protect project costs from foreign exchange movements and we recognise that developers use a variety of financial instruments to achieve this.

The Developer has stated that it did not hedge against foreign exchange movements when it made its Financial Investment Decision in June 2015; instead, it sought further clarification from us on the treatment of currency exchange movements. In May 2016, we clarified our view how we would treat the impact of foreign exchange movements during the cost assessment process. The Developer then placed an initial tranche of hedges for the committed costs and continued to place additional hedges on a monthly basis as additional costs were committed or payment timings were revised. The CAT submitted by the Developer reflects this by putting through all costs at a spot rate or a forecast rate, but then including an offset in the CR9 category that adjusts for the Developer's calculation of the difference between hedged and spot rates or hedged and forecast rates in the period from June 2016 onwards.

We expect the exchange rates used throughout the CAT to reflect the hedged rates, rather than the spot or forecast rate. We have discussed with the Developer an adjustment to the ITV to reflect our view of the appropriate hedged rates that we deem should have been applied throughout the CAT. This also includes an adjustment for some resource costs, which the Developer elected not to hedge, but which we determined were sufficiently certain to be treated as committed costs for hedging. As a result, we have made a net reduction of \pounds 1.52m to the ITV.

Individual cost categories

We have undertaken a detailed assessment of the submitted costs on a category-bycategory basis. The following sections discuss each of these in turn, namely:

- Offshore substation
- Sea cable supply and installation
- Onshore cable supply and installation
- Onshore Substation
- Reactive Substation
- Connection Costs
- Transaction costs
- Interest During Construction

It should be noted that the Developer chose a design based on 2x220kV cables rather than a more typical one using 4x132kV cables. We reviewed the technical basis for this higher voltage design and are satisfied that it constitutes a reasonable alternative to the lower voltage design. Our focus in the following sections has been to compare the costs of the 220kV system with those of our benchmarks (which are predominantly based on 132kV systems).

Offshore substation platform (OSP)

Our review compared the Project's OSP costs with those of other comparable projects, including the fabrication, installation, electrical components, design, Variation Orders and internal resource.

The Developer stated that the overall cost of the OSP, based on their 220kV design, is higher than would have been achieved with a 132kV design. This is because the 220kV design necessitated the installation of heavier equipment on the OSP. However, the Developer argued that the higher OSP cost would be more than offset by cost savings on the supply and installation of the subsea cable.

We have considered carefully the justification for the level of submitted costs including the argument that there is an offsetting saving on the cable supply and installation. While our assessment does not agree with the Developer's value of the saving, we are reasonably satisfied that the costs incurred by the Developer on the OSP can be considered to be economic and efficient, based on the additional weight of equipment required to support a 220kV cable design.

In the same way that we considered the cost of additional weight on the OSP due to the 220kV design, we have analysed the additional cost of the OSP due to weight of the generator equipment. Our view is that the weight of generator equipment is significant enough to justify a contribution from the generator to the overall cost of the OSP. We estimated this cost to be £1.1m. We have therefore reduced ITV by this amount.

Submarine cable supply

The Developer submitted costs include the cost of submarine cable design, supply and a commensurate proportion of internal resource and travel costs assigned to designing, developing and manufacturing the asset. The cable design consists of two 220kV cables rather than four 132kV cables that we have seen in majority of previous projects of this size. The Developer has stated that as the 220kV cable supply market is less developed, there were fewer suppliers with suitable capability. This may explain the higher than expected cost compared to the cost estimated by our internal models.

Our assessment indicates that that the cable supply cost for two 220kV cables should be lower than the cost of procuring four 132kV cables. After consideration of the Developer's circumstances regarding procurement of 220kV cables and taking on board our review of the procurement process, our view is that the costs can be considered as being economic and efficient.

Submarine cable installation

The Developer submitted costs for this sub-category include the cost of submarine cable installation and a commensurate proportion of internal resource and travel costs assigned to designing, developing and constructing the asset. Our assessment had indicated the costs to be higher than costs estimated for a project with a similar total cable length.

The Developer has highlighted a number of project-specific characteristics to justify higher cost in this subcategory including traversing a salt marsh and mudflats, fisheries, and significantly large numbers of unexploded ordinance (UXO) and boulders. The Developer submitted a set of quantified information to justify the costs of the submarine cable installation.

Given the timing of the ITT we were not able to fully scrutinise this information and we will need to investigate this at FTV. In the meantime, we have allowed all of the cost submission to be included in the ITV.

However, we want to highlight some, but not all, of the issues we will be following-up at FTV:

- <u>UXO and EOD</u>: the Developer submitted cost was in part allocated to the transmission assets. GT have highlighted that, although the values can be traced, the allocation methodology is unclear. If the allocation methodology cannot be confirmed, we are minded to resort to a capex ratio allocation rate, in which case a reduction of £3.1m would apply at FTV.
- <u>Fisheries</u>: the Developer submitted cost was in part allocated to the transmission assets. GT have highlighted that, although the values can be traced, the allocation methodology is unclear. If the allocation methodology cannot be confirmed, we are minded to resort to a capex ratio allocation rate and apply a reduction at FTV.
- <u>HDD works and sea defence breach</u>: Information provided to Ofgem indicates that the use of Horizontal Directional Drilling was explored. As a result, a number of costs were incurred and these will be investigated further at FTV.

Onshore cable

Our assessment of the Developer submitted costs against projects of a similar size and nature indicates the cost incurred was economic and efficient.

Onshore substation

Our review compared the Project's Onshore Substation costs with those of other comparable high voltage (HV) projects. Including the electrical, design and internal resource re-allocation costs, the onshore substation cost compares well against the average indexed cost for similar projects. In addition to this amount, there is a cost for reactive and harmonics filtering equipment on this project.

Having considered the costs submitted and the justifications provided, our view is that the costs incurred by the Developer for this category are economic and efficient.

Connection costs

The Developer carried out the unlicensed works in the National Grid Electricity Transmission (NGET) substation by direct contract with Mitsubishi following competitive tender for that work. NGET declined to offer to carry out this unlicensed work for commercial reasons. The Developer has confirmed that these assets are transferring to the OFTO and were procured under competitive tender to NGET's specification.

We acknowledge that these works were necessary to allow the efficient progress of the Project. Accordingly, we consider that the full costs included in the ITV submission are acceptable.

Transaction costs

The Developer submitted an estimate for Transaction costs of ± 3.4 m. As this level is broadly in line with previous projects and these costs will only be incurred at the later stages of the Project, we have included them in the ITV and intend to review them at the FTV stage.

Interest During Construction (IDC)

IDC refers to the cost of financing the development and construction of offshore transmission assets.

The decisions we have made with respect to deductions to the Project's CAPEX costs for the ITV result in a consequential IDC reduction. The magnitude of this deduction will be dependent on detailed information relating to the spend profile of included costs, and so is subject to further review. Our current estimate of the IDC value for the ITV is \pm 36.8m. This includes a deduction to the Developer's submitted value as a consequence of reaching 'first power' one month earlier than scheduled. We will keep this under review for the Project's FTV.

Ofgem's decision on indicative transfer value for the Project

The ITV for the Project is set out in Table 1 below, which also sets out the initial transfer value at EPQ for comparison.

Item	Initial Transfer Value at EPQ (£m)	Indicative Transfer Value (£m)
Capital expenditure and development costs	484.0	464.1
IDC	46.4	36.8
Indicative Transfer Value (with IDC)	530.4	500.9

Table 1: Comparison of initial transfer value and ITV

Next steps

The cost assessment process for the Project will proceed into the calculation of the FTV, based on further updates on costs to be provided by the Developer as the Project progresses. To inform our FTV assessment we intend to work closely with the Developer. The process will involve the following:

- A forensic accounting review and closing down the issues identified in this letter; and
- A further review of the Project's capital expenditure. This will be assisted by independent consultants, as appropriate.

If you have any questions regarding this letter, please contact Katherine Taaffe on 020 7901 7014 (or katherine.taaffe@ofgem.gov.uk) in the first instance.

Yours sincerely,

Min Zhu

Associate Partner, Electricity Transmission