Making a positive difference
for energy consumers

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Our Ref: ITV letter
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Email: Jourdan.Edwards@ofgem.gov.uk

Date: 20 October 2021

Dear Enrique,

Indicative Transfer Value for the Moray East Offshore Windfarm Transmission assets

Introduction

1. The Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2015 (the **Tender Regulations**) provide the legal framework for the process which Ofgem[1] 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 the project.

2. We wrote to Moray Offshore Windfarm (East) Limited (the **Developer**) on 15 October 2020, confirming that the £720.0m forecast of costs provided to us on 27 August 2020, for the development and construction (including financing) of the Moray East Offshore

[1] References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work.

Windfarm transmission assets (the **Project**), would be taken as its initial transfer value (the **Initial Transfer Value** or **InTV**). This value was included in the Enhanced Pre-Qualification (**EPQ**) document and the preliminary information memorandum for the commencement of the EPQ stage of the Project.

3. As part of its ITV submission, the developer submitted a cost assessment template (**CAT**) on 29 January 2021 and subsequently provided an updated version on 05 February 2021 (**CAT RevA**) and a further update (**CAT RevB**) on 19 February 2021. A fourth version of the CAT was submitted (**CAT RevC**) on 19 March 2021. CAT RevC was used both for the Ofgem analysis of submitted costs and the forensic analysis by our forensic independent accounting consultants Grant Thornton (**GT**). The other versions were not used for the analysis.

4. We have now completed the review of the CAT RevC and ancillary cost information provided by the Developer. This letter sets out:

    a) An overview of the work that has been undertaken to estimate the ITV;
    b) Our decision to set £647.8m as the ITV for the Project; and
    c) The next steps in the cost assessment process.

5. We note that all costs set at this ITV stage may be revisited at the FTV stage and, unless explicitly stated that a cost item is closed, the Developer may be required to provide further justification for costs during discussions to set the FTV.

Overview of work to arrive at the ITV

6. We have engaged extensively with the Developer to understand the costs submitted 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 Project. We have calculated the ITV based on:

    a) A forensic accounting review of the cost submissions;
    b) Additional information provided by the Developer to substantiate costs; and
    c) Our assessment of the efficiency of costs, across relevant cost categories.

Findings of the ITV review

7. Table 1 provides an overview of the total cost adjustments we made to the Developer's costs submissions that were set out in the CATRevC. These values include adjustments made by the Developer, GT and by us.

*Table 1 – Overall ITV adjustment**

Cost	Developer's submitted cost in the CATRevC (£m)	Adjustment (£m)	ITV (£m)
Capital expenditure and development costs	695.6	-112.0	583.6
Interest During Construction (**IDC**)	80.9	-16.7	64.2
Total	**776.5**	**-128.7**	**647.8**

8. The following sections provide a high-level summary of the adjustments that we made to the individual cost categories for the Project. The Appendix provides further details on the adjustments, covering each of them individually and including more information on the rationale behind each adjustment.

9. Please note that we derived the values within this letter from spreadsheets and the values have been rounded therefore, in some cases, the total may not sum up.

GT ex-ante review

10. As a result of the investigation conducted, GT have applied an adjustment of [redacted] to the cost of the transmission assets and have highlighted a total amount of unsubstantiated costs of [redacted]. Part of this cost is for financing costs of [redacted] that the Developer included in CATRevC and is dealt with in paragraph 26 of this letter

11. We have included the GT adjustments into the ITV. The impact of these adjustments made to the ITV as a result of their investigation is described in the following paragraphs.

Offshore substation platform (OSP)

12. Following our ITV review, we have applied an overall reduction to the OSP category of £8.3m, made up by the following adjustments:

    a) a reduction of £4.5m for generator weight contribution to the offshore transmission modules (**OTM**);

b) a reduction of £3.6m for costs identified by the Developer;
c) a reduction of £0.5m in costs for an adjustment to expected spares required;
d) a reduction of £85k related to a variation for expedited shipment of jacket tubulars; and
e) a positive adjustment of £0.4m identified by GT based on the updated consolidated claims package from one of the contractors.

13. As a result of the above adjustments, we have estimated the value of [redacted] to reflect the cost of the OSP for the ITV.

Submarine cable

14. Following our ITV review, we have made an overall reduction of £11.0m to the submarine cable cost category, consisting of the following adjustments:

a) a net reduction of £10.0m for adjustments to the CAT RevC figures to match those highlighted in GT's ex-ante review;
b) a reduction of £0.8m for fibre optic cables used by the generator for generation purposes;
c) a reduction of £0.1m related to a variation for border quarantine during the Covid pandemic; and
d) a reduction of £0.1m related to the storage of the spare cable in an onshore storage facility.

15. As a result of the adjustments above, we have estimated the value of [redacted] to reflect the cost of the submarine cable at ITV.

Onshore cables

16. The Developer submitted costs in the CATRevC for the design, fabrication, installation and project management for the onshore cables.

17. Following our ITV review, we made an overall reduction of £25.3m to the Developer's onshore cable cost category. The adjustments applied consisted of:

a) a reduction of £24.4m due to the delta in the Developer's submitted costs and our benchmarked costs;
b) a reduction of £0.6m for fibre optic cables used by the generator for generation purposes; and

c) GT highlighted a negative adjustment of £0.2m for incorrect reallocations in CAT RevC and new calculated costs for land rights.

18. As a result of the above adjustments, we estimated the value of [redacted] to reflect the cost of the onshore cables for the ITV.

Onshore substation

19. The Developer submitted costs in the CATRevC for the design, construction and project management of the onshore substation.

20. Following our ITV review, we made an overall reduction of £12.7m, made up by the following adjustments:

a) a reduction of £11.3m due to a delta in the Developer's submitted costs and our benchmarked value;
b) a reduction of £0.6m for the area of the onshore substation space occupied by generation-related equipment;
c) a reduction of £0.4m highlighted by the Developer for items not relevant to the transmission assets;
d) a positive adjustment of £0.3m highlighted by GT due to revised calculations for estimated costs; and
e) as part of their review, GT have highlighted a reduction of £0.1m due to reduced estimate of landscaping costs.

21. Based on the above adjustments, we have estimated the value of the onshore substation for the ITV at [redacted].

Reactive compensation equipment (RCE)

22. The Developer submitted costs in the CATRevC for the design, supply, installation, commissioning and project management of the RCE. Following our ITV review, we have not made any adjustments to this category, therefore the estimated value at ITV for the reactive compensation equipment is [redacted].

Connection works

23. The Developer submitted costs for the connection works undertaken by SSEN Transmission. We applied a reduction of £5.4m to the Developer's submitted costs as GT highlighted that the Developer had provided updated calculations for this cost.

24. As a consequence, we have estimated the cost in the Connection category for the ITV to be [redacted].

Other costs

25. The Developer submitted costs, including end-to-end project management and development costs, into the category "Other costs".

26. Following our ITV review, we have reduced the costs of this category by £49.3m. The adjustments applied consisted of:

    a) a reduction of £38.0m for current and historic financing costs. We have removed these costs from the ITV as they are covered by IDC (Interest During Construction);
    b) a net reduction of £6.4m highlighted by GT. This is made up of 24 line items with adjustments made for various reasons and is detailed in Table 9 of the Appendix;
    c) a reduction of £4.5m for generation related metrological mast ("met mast") costs;
    d) a reduction of £0.3m for operations and maintenance costs;
    e) a reduction of £0.2m for staffing rates allocations which were adjusted from 50% to the standard 23% allocation used for this project; and
    f) a reduction of £3k identified by the Developer as an incorrect posting for Ofgem tender entry costs.

27. Based on the above adjustments, we estimated the value of this category for the ITV to be [redacted].

Transaction costs

28. The Developer submitted transaction costs of [redacted] into CATRevC.

29. Transaction costs are, at this stage, not fully defined and are, in the main, an estimate of costs. We have not applied any adjustment at this stage and these costs will be fully reviewed at the FTV stage.

IDC

30. The Developer submitted costs in the CATRevC for the Project's IDC. We have made an overall reduction of £16.7m to the IDC. This included:

    a) a positive adjustment of £3.5m to correct the IDC rate and a formula error;
    b) a reduction of £4.8m for adjusting the duration of the pre-FID period to reflect the economic and efficient duration under the Development Consent Order (**DCO**) regime;
    c) we applied a reduction of £3.1m to account for the point in time when IDC should cease, which was in advance of the Developer's date; and
    d) the IDC was adjusted by a further £12.3m, proportionate to the reduction in capex caused by costs not being included in the ITV.

31. As with each of the costs at the ITV stage, this IDC figure is likely to be revised in response to any new adjustments or disallowances arising from the FTV assessment.
32. Based on these adjustments, we have included an estimated value of [redacted] for the Project's IDC.

Next steps

33. The cost assessment process for the Project will now proceed to the FTV assessment stage. To inform our FTV assessment, we intend to work closely with the Developer and will consider further updates from the Developer on costs as the Project progresses and any new information that is submitted, including those related to certain costs disallowed at ITV. The FTV process will involve the following:

    a) An ex-post forensic review; and
    b) A detailed review of the Project's capex and development costs, including, but not limited to:

        i. onshore substation costs for generation
        ii. onshore cable costs
        iii. spares for onshore and offshore cable
        iv. boulder removal works for the sea cable installation
        v. costs incurred due to the Coronavirus pandemic

34. We will also be carrying out a review of the costs for the 400kV filter upgrade work that is being carried out by the Developer (confirmed in an email on the 7 September 2021).

35. These reviews may be assisted by independent technical consultants.

36. If you have any questions regarding this letter, please contact Kayleigh Watson on 020 3263 9960 (Kayleigh.Watson@ofgem.gov.uk) in the first instance.

Yours sincerely,

Jourdan Edwards
Head of the OFTO Regime

Appendix: Reconciliation of costs

1. This appendix provides a detailed summary of the adjustments that have been applied to the Developer's submission (CATRevC) for estimating the ITV.

*Table 2 - Adjustments made to cost categories**

Cost category	Submitted cost (£m)	Total adjustment (£m)	ITV (£m)	Adjustment (£m)	Description
Offshore Substation	***136.5***	***-8.3***	***128.2***	***-4.5***	Ofgem – Generator weight contribution on OTM
				-1.2	ME – VAR - Inline connectors support [not relevant to OFTO asset]
				-0.8	ME – ETC – Remeasurement [figure finalised]
				-0.5	GT – Spares [adjustment to expected figure]
				-0.5	ME – ETC - Covid claims [figure finalised]
				-0.4	ME – ETC – modifications to OSP J-Tube [figure finalised]
				-0.3	ME – VAR- Intertrip to Offshore 66kv Transformer [not relevant to OFTO asset]
				-0.3	ME – ETC – Incomplete MTO [figure finalised]
				-0.0	Ofgem (£86k) – VAR – Shipment of jacket tubulars [poor interface management]
				-0.0	ME (£56k) – VAR – In-line connectors jointing [not relevant to OFTO asset]
				-0.0	ME (£40k) – VAR - In-line connectors engineering [not relevant to OFTO asset]
				-0.0	ME (£40k) – VAR - In-line connectors engineering [not relevant to OFTO asset and a duplicate of above]
				-0.0	ME (£30k) – VAR – Snagmaster Software [not relevant to OFTO asset]
				-0.0	Ofgem (£13k) – Spares [Tier 2 and 3 spares removed as consumables]
				-0.0	ME (£7k) – VAR – Commissioning Engineer Support [not relevant to OFTO asset]
				-0.0	ME (£7k) – VAR – OSP 3D Model [not relevant to OFTO asset]
				-0.0	ME (£3k) – VAR – In-line connectors programme workshop [not relevant to OFTO asset]
				0.4	GT – VAR – GSMEC consolidated claims package [adjusted to reflect package amount]
Submarine Cables	**159.0**	**-11.0**	**148.0**	***-7.0***	GT - NKT Main Contract [adjusted to reflect package amount]
				-2.6	GT - Planned/forecasted spend [item is no longer applicable]
				-1.0	GT - Contingency [item in risk register no longer applicable]
				-0.8	Ofgem - Generation use of fibres in export cable
				-0.2	GT - OEC Site 6 PC Role April [updated to match supporting documentation]
				-0.1	Ofgem – VAR - Border quarantine Dec/Jan [poor interface management]
				-0.1	Ofgem – VAR – Pro rata adjustment for storage of spare cable in onshore storage facility
				-0.0	GT (£45k) – VAR - Boulder Grabbing Works [adjusted to match supporting documentation]
				0.7	GT – VAR - WoW remedial rock replacement [adjusted to reflect documentation]
					Ofgem – Spares – no adjustment for ITV
Onshore Cables	**91.2**	**-25.3**	**65.9**	***-24.4***	Ofgem - Delta in benchmark value to submitted value
				-0.6	Ofgem - Generation use of fibres in export cable
				-0.1	GT - Reallocation/corrections [incorrect re-allocations and misstatement of figure in CAT]
				-0.1	GT - Cost for land rights for onshore export cable [updated calculations from Developer]
					Ofgem – Spares – no adjustment for ITV
Onshore substation	**138.3**	**-12.7**	**125.7**	***-11.3***	Ofgem - Delta in benchmark value to submitted value
				-0.6	Ofgem - Onshore substation generator space occupancy costs
				-0.4	Ofgem – Spares [Tier 2 and 3 spares removed as consumables]
				-0.4	ME - DMZ Equipment & Supply of Redundant Network Connection [Not relevant to OFTO asset]

				-0.1	GT – ETC - Landscaping for onshore substation [indicative estimate from landscaper lower than CAT]
				-0.1	Ofgem – VAR - Siemens Settlement Deed Claim 61 [poor interface management] pro-rated
				-0.0	Ofgem (£45k) – VAR - Siemens Settlement Deed Claim 50 [poor interface management] pro-rated
				0.0	GT (£40k) - Devex - Siemens transmission and distribution [adjusted to match invoice supplied]
				0.1	GT – VAR - Construction Compounds [calculations from Developer show higher cost to complete]
				0.1	GT - Spares [revised breakdown of expected spares]
Reactive	***42.6***	***0.0***	***42.6***		
Connection	***10.1***	***-5.4***	***4.7***	***-5.4***	GT - Estimate cost to complete for SHETL 6 week delay [Developer provided updated calculations]
Other Costs	***116.3***	***-49.3***	***67.0***	***-25.9***	Ofgem - Future financing costs- we consider his to be covered by the allowances in the IDC rate allowed for the project. We would disallow any previous expenditure for financing costs for the same reason
				-12.1	Ofgem - Historic financing costs - see above
				-4.5	Ofgem - Met mast costs [these are generation costs]
				-1.5	GT - Boskalis EOD services [CAT amount overstated]
				-1.4	GT - ONSW Client Reps [not included in PM costs schedule]
				-1.2	GT - Offshore met mast Decommissioning
				-0.9	GT - Servitude [duplicated]
				-0.8	GT - Re-allocation/corrections [items not relevant to OFTO asset]
				-0.7	GT - ECoW [contract amount is different to CAT]
				-0.4	GT - OFSS Client Rep [not included in PM costs schedule]
				-0.4	GT - Contingency [corrected to reflect 23% rate]
				-0.3	GT - OSEC Client Reps [not included in PM costs schedule]
				-0.3	Ofgem - O&M costs cannot be included as they are ongoing costs, not development or construction costs
				-0.3	GT - OFTO HV Commissioning Services [not included in PM costs schedule]
				-0.2	GT - Brown & May Marine Ltd Base Scope [Not relevant to OFTO asset]
				-0.2	GT - OFTO Vessel Rates [contract terminated early]
				-0.2	Ofgem - OPCO staffing rates [adjustment from 50% allocation to 23% allocation due to insufficient justification]
				-0.1	GT - OFTO Final one off work GIS Bays [duplicated]
				-0.1	GT - Construction Compounds [duplicated]
				-0.1	GT - CMS Staff [not included in PM costs schedule]
				-0.0	GT (£30k) - Natural Power [adjusted to match supporting document]
				-0.0	ME (£3k) - Ofgem Tender Entry [incorrect amount included in CAT]
				0.1	GT - Supply/Fabrication works [adjusted to match PO]
				0.1	GT - Natural Power [adjusted to match supporting document]
				0.1	GT- IT fixed cost [updated calculation of costs]
				0.2	GT - IT Variable cost [updated calculation of costs]
				0.3	GT - Office cost [updated calculation of costs]
				0.3	GT - Re-allocation/corrections [negative items not relevant to OFTO asset]
				0.6	GT - Change in cost allocation rates [to be consistent with 23% approach]
				0.7	GT - Crop compensation [updated calculation of estimated costs]
Transaction costs	***1.7***	***0***	***1.7***		
Total (exc. IDC)	**695.6**	**112.0**	**583.7**		
IDC	***80.9***	***-16.7***	***64.2***	***-12.3***	1. Change in IDC rate to 6.5% and formula correction
				-4.8	2. IDC duration reduction for development phase
				-3.1	3. Change in assets available for use and dates of ION B(more info needed on dates)
				3.5	4. Pro-rata reduction following disallowances
Total (incl. IDC)	**776.5**	**-128.7**	**647.8**		

**totals may not reconcile due to rounding.*

2. The following sections provide further information on the adjustments that we made to each cost category, including a detailed explanation of our rationale behind each adjustment. Please note that figures in all the tables have been rounded, therefore totals may not reconcile.

Offshore substation

Table 3 - Adjustments made to the offshore substation category

Cost category	Submitted cost (£m)	Total adjustment (£m)	ITV (£m)	Adjustment (£m)	Description
Offshore Substation	***136.5***	***-8.3***	***128.2***	***-4.5***	Ofgem – Generator weight contribution on OTM
				-1.2	ME – VAR - Inline connectors support [not relevant to OFTO asset]
				-0.8	ME – ETC – Remeasurement [figure finalised]
				-0.5	GT – Spares [adjustment to expected figure]
				-0.5	ME – ETC - Covid claims [figure finalised]
				-0.4	ME – ETC – modifications to OSP J-Tube [figure finalised]
				-0.3	ME – VAR- Intertrip to Offshore 66kv Transformer [not relevant to OFTO asset]
				-0.3	ME – ETC – Incomplete MTO [figure finalised]
				-0.0	Ofgem (£86k) – VAR – Shipment of jacket tubulars [poor interface management]
				-0.0	ME (£56k) – VAR – In-line connectors jointing [not relevant to OFTO asset]
				-0.0	ME (£40k) – VAR - In-line connectors engineering [not relevant to OFTO asset]
				-0.0	ME (£40k) – VAR - In-line connectors engineering [not relevant to OFTO asset and a duplicate of above]
				-0.0	ME (£30k) – VAR – Snagmaster Software [not relevant to OFTO asset]
				-0.0	Ofgem (£13k) – Spares [Tier 2 and 3 spares removed as consumables]
				-0.0	ME (£7k) – VAR – Commissioning Engineer Support [not relevant to OFTO asset]
				-0.0	ME (£7k) – VAR – OSP 3D Model [not relevant to OFTO asset]
				-0.0	ME (£3k) – VAR – In-line connectors programme workshop [not relevant to OFTO asset]
				0.4	GT – VAR – GSMEC consolidated claims package [adjusted to reflect package amount]

2.1. As Table 3 shows, we have calculated a value of £128.2m for this cost category. We have made a reduction of £8.3m to the Developer's submitted costs. Our rationale behind each adjustment is set out as follows:

2.1.1. We have applied a reduction of £4.5m for generator weight contribution to the offshore transmission modules (OTM). We consider the costs not included in the ITV to reflect the use of the OTM for generation purposes. In conjunction with the Developer, we have therefore apportioned the cost shown here to the generator.

2.1.2. We have agreed a reduction of £3.6m for costs identified by the Developer. This includes multiple smaller costs changes driven by inaccuracies in the submitted CATRevC or costs that were estimated at the time of submission but were confirmed during the period of our review.

2.1.3. We have applied a reduction of £0.5m in costs for expected spares required. The estimated spares required were reduced by the Developer. There is also a small portion of this reduction (£13k) that is attributable to Tier 2 and Tier 3 spares which we view as operational consumables with short lead times and therefore not strategic spares. These have been removed from the ITV.

2.1.4. We have applied a reduction of £85k related to a variation for expedited shipment of jacket tubulars. We consider this cost would have been avoided through more effective interface management

2.1.5. We have applied a positive adjustment of £0.4m identified by GT where the cost of a consolidated claims package was not accurately stated in the CAT. The adjustment reflects the cost stated in supporting documentation.

Submarine cable

Table 4 - Adjustments made to the submarine cables category

Cost category	**Submitted costs (£m)**	**Total adjustment (£m)**	**ITV (£m)**	**Adjustment (£m)**	**Description**
Submarine Cables	**159.0**	**-11.0**	**148.0**	***-7.0***	GT - NKT Main Contract [adjusted to reflect package amount]
				-2.6	GT - Planned/forecasted spend [item is no longer applicable]
				-1.0	GT - Contingency [item in risk register no longer applicable]
				-0.8	Ofgem - Generation use of fibres in export cable
				-0.2	GT - OEC Site 6 PC Role April [updated to match supporting documentation]
				-0.1	Ofgem – VAR - Border quarantine Dec/Jan [poor interface management]
				-0.1	Ofgem – VAR – Pro rata adjustment for storage of spare cable in onshore storage facility
				-0.0	GT (£45k) – VAR - Boulder Grabbing Works [adjusted to match supporting documentation]
				0.7	GT – VAR - WoW remedial rock replacement [adjusted to reflect documentation]
					Ofgem – Spares – no adjustment for ITV

2.2. As set out in Table 4, we estimated a value of £148.0m for this cost category for the ITV. We applied a reduction of £11.0m to the Developer's submitted costs in CATRevC. The rationale behind each of the adjustments, is set out as follows:

2.2.1. During the ex-ante review carried out by GT, they identified a reduction of £10.0m for costs based numerous adjustments to the CATRevC to reflect additional submitted documentation and revised estimates provided by the Developer. These costs have not been included in the ITV.

2.2.2. The Developer has installed fibre optic cables that will be used by both the generator and the OFTO. The Developer stated that for onshore cables, the generator uses 24 (50%) out of the 48 fibres installed in total. The submarine cable contract does not provide a breakdown of fibre cable costs. To estimate the breakdown, we have calculated the proportion of fibre costs in the onshore cable contract (1.16%) and applied it to the submarine cable contract. We have then applied the 50% allocation to this. The resulting £0.8m of costs are generator fibre costs for the submarine cable and not included in the ITV.

2.2.3. We have applied a reduction of £0.1m related to a variation for UK border quarantine rules during the Covid pandemic. A number of contractors arrived early to the UK to complete quarantine prior to other relevant contractors arriving. Once their quarantine was completed they could not commence work until the other contractors were on site. We consider that the contractors should have arrived and quarantined in time for relevant works to begin. This resulted in additional accommodation costs that we do not consider to be economic and efficient.

2.2.4. We have applied a reduction of £0.1m related to storage of the spare cable in an onshore storage facility. The amount has been adjusted pro rata for the date of first power, at which point we consider this an operational cost. Operational costs are not development or construction costs and therefore cannot be included.

Onshore cables

Table 5 - Adjustments made to the onshore cables category

Cost category	**Submitted costs (£m)**	**Total adjustment (£m)**	**ITV (£m)**	**Adjustment (£m)**	**Description**
Onshore Cables	**91.2**	**-25.3**	**65.9**	***-24.4***	Ofgem - Delta in benchmark value to submitted value
				-0.6	Ofgem - Generation use of fibres in export cable
				-0.1	GT - Reallocation/corrections [incorrect re-allocations and misstatement of figure in CAT]
				-0.1	GT - Cost for land rights for onshore export cable [updated calculations from Developer]
					Ofgem – Spares – no adjustment for ITV

2.3. As Table 5 shows, we estimated a value of £65.9m for this cost category for the ITV. We applied a total reduction of £25.3m to the Developer's submitted costs in the CATRevC. Our rationale behind each of the adjustments is set out as follows:

2.3.1. A reduction of £24.4m related to the delta between our benchmark model results and the submitted costs from the Developer. The Developer submitted several items as being unique to the Project to explain the delta. We considered these and accepted the project specific costs in addition to our benchmark value. The project specific costs were for:

- foreign exchange losses and metal price volatility between bid submission and contract signing;
- site enabling and drainage works; and
- a larger diameter cable cross section used on this project.

The remaining costs we consider have not been substantiated by the Developer and therefore have not been included in the ITV.

2.3.2. As in section 2.2.2, a reduction has been made due to the inclusion of fibre optics used by the generator. This has resulted in a reduction of £0.6m.

2.3.3. GT highlighted a negative adjustment of £0.2m for incorrect reallocations in CAT RevC and new calculated costs for land rights.

Onshore substation

Table 6 - Adjustments made to the onshore substation category

Cost category	**Submitted costs (£m)**	**Total adjustment (£m)**	**ITV (£m)**	**Adjustment (£m)**	**Description**
Onshore substation	**138.3**	**-12.7**	**125.7**	***-11.3***	Ofgem - Delta in benchmark value to submitted value
				-0.6	Ofgem - Onshore substation generator space occupancy costs
				-0.4	Ofgem – Spares [Tier 2 and 3 spares removed as consumables]
				-0.4	ME - DMZ Equipment & Supply of Redundant Network Connection [Not relevant to OFTO asset]
				-0.1	GT – ETC - Landscaping for onshore substation [indicative estimate from landscaper lower than CAT]
				-0.1	Ofgem – VAR - Siemens Settlement Deed Claim 61 [poor interface management] pro-rated
				-0.0	Ofgem (£45k) – VAR - Siemens Settlement Deed Claim 50 [poor interface management] pro-rated
				0.0	GT (£40k) - Devex - Siemens transmission and distribution [adjusted to match invoice supplied]
				0.1	GT – VAR - Construction Compounds [calculations from Developer show higher cost to complete]
				0.1	GT - Spares [revised breakdown of expected spares]

2.4. As Table 6 shows, we estimated a value of £125.7m for this cost category for the ITV. We have applied an adjustment of £12.7m to the Developer's submitted costs in the CATRevC. The rationale behind these adjustments is as follows:

A reduction of £11.3m related to the delta between our benchmark model results and the submitted costs from the Developer. The Developer submitted several items as being unique to the Project to explain the delta. These were:

- foreign exchange losses between bid submission and contract signing;
- variations which partly include covid related costs;
- site levelling costs;
- communications and metering costs; and
- a constraint on reactor sizing meaning several smaller 220kv units were installed.

2.4.1. Both communications and metering costs and variation orders have been accepted in full as a unique characteristics that drive higher cost for benchmarking purposes. However, these costs have been adjusted elsewhere in the project assessment. See table 6 for the adjustments made to the onshore substation costs. Accepting these costs as unique characteristics ensures that they are not deducted twice from the ITV allowance.

2.4.2. Part of the onshore substation will be used exclusively by the generator and is therefore not relevant to the ITV. We asked the Developer to submit the percentage of the onshore substation area occupied by generation-related equipment. We have used the Developer submitted diagram of the onshore substation to calculate that the generator will use 0.18% of the building and plot. The resulting estimated value for this space is £0.6m, which has been excluded from the ITV.

2.4.3. A reduction of £0.4m has been made to remove costs related to utility demilitarized zone (**DMZ**) equipment and the supply of a redundant network connection as these costs are not relevant to the transmission assets.

2.4.4. We have applied a reduction of £0.3m in costs for expected spares required. First, the spares required were misstated in the CATRevC, which led GT to make a positive adjustment of £0.1m. Secondly, we have made a reduction of £0.4m relating to spares cost that is attributable to Tier 2 and Tier 3 spares. We view these as consumables with short lead times, not strategic spares with the requirement to be ordered in advance. These have not been included in the ITV.

2.4.5. During their review, GT made a net positive adjustment to this cost category of £0.1m due to updated calculations from the Developer and mis-statements in the CATRevC. This does not include the adjustment previously made to spares costs.

2.4.6. We have removed a further £0.1m from a settlement deed with the contractor due to poor interface management on two claims. We have prorated this figure as the settlement deed was negotiated by the Developer.

Reactive compensation equipment (RCE)

Table 7 - Adjustments made to the reactive compensation category

Cost category	**Submitted cost (£m)**	**Total adjustment (£m)**	**ITV (£m)**	**Adjustment (£m)**	**Description**
Reactive equipment	**42.6**	**0.0**	**42.6**		

2.5. The Developer submitted a cost of £42.6m in the CATRevC for the design, supply, installation, commissioning and project management of the RCE. Following our ITV review, we have not made any adjustment to this figure.

Connection works

Table 8 - Adjustments made to the connection category

Cost category	**Submitted cost (£m)**	**Total adjustment (£m)**	**ITV (£m)**	**Adjustment (£m)**	**Description**
Connection	***10.1***	***-5.4***	***4.7***	**-5.4**	GT - Estimate cost to complete for SHETL 6 week delay [Developer provided updated calculations]

2.6. As Table 8 shows, we estimated a value of £4.7m for this cost category for the ITV. We applied a reduction of £5.4m to the Developer's submitted costs to reflect updated calculations for these works provided to GT. Consequently, this has not been included in the ITV.

Other costs

Table 9 - Adjustments made to the other costs category

Cost category	Submitted cost, (£m)	Total adjustment (£m)	ITV (£m)	Adjustment (£m)	Description
Other Costs	***116.3***	***-49.3***	***67.0***	***-25.9***	Ofgem - Future financing costs- we consider his to be covered by the allowances in the IDC rate allowed for the project. We would disallow any previous expenditure for financing costs for the same reason
				-12.1	Ofgem - Historic financing costs - see above
				-4.5	Ofgem - Met mast costs [these are generation costs]
				-1.5	GT - Boskalis EOD services [CAT amount overstated]
				-1.4	GT - ONSW Client Reps [not included in PM costs schedule]
				-1.2	GT - Offshore met mast Decommissioning
				-0.9	GT - Servitude [duplicated]
				-0.8	GT - Re-allocation/corrections [items not relevant to OFTO asset]
				-0.7	GT - ECoW [contract amount is different to CAT]
				-0.4	GT - OFSS Client Rep [not included in PM costs schedule]
				-0.4	GT - Contingency [corrected to reflect 23% rate]
				-0.3	GT - OSEC Client Reps [not included in PM costs schedule]
				-0.3	Ofgem - O&M costs cannot be included as they are ongoing costs, not development or construction costs
				-0.3	GT - OFTO HV Commissioning Services [not included in PM costs schedule]
				-0.2	GT - Brown & May Marine Ltd Base Scope [Not relevant to OFTO asset]
				-0.2	GT - OFTO Vessel Rates [contract terminated early]
				-0.2	Ofgem - OPCO staffing rates [adjustment from 50% allocation to 23% allocation due to insufficient justification]
				-0.1	GT - OFTO Final one off work GIS Bays [duplicated]
				-0.1	GT - Construction Compounds [duplicated]
				-0.1	GT - CMS Staff [not included in PM costs schedule]
				-0.0	GT (£30k) - Natural Power [adjusted to match supporting document]
				-0.0	ME (£3k) - Ofgem Tender Entry [incorrect amount included in CAT]
				0.1	GT - Supply/Fabrication works [adjusted to match PO]
				0.1	GT - Natural Power [adjusted to match supporting document]
				0.1	GT- IT fixed cost [updated calculation of costs]
				0.2	GT - IT Variable cost [updated calculation of costs]
				0.3	GT - Office cost [updated calculation of costs]
				0.3	GT - Re-allocation/corrections [negative items not relevant to OFTO asset]
				0.6	GT - Change in cost allocation rates [to be consistent with 23% approach]
				0.7	GT - Crop compensation [updated calculation of estimated costs]

2.7. As Table 9 shows, we estimated a value of £67.0m for this cost category for the ITV. We applied a reduction of £49.3m to the Developer's submitted costs and the rationale behind each adjustment are as follows:

2.7.1. We have made a reduction of £38.0m for the Developer's submitted current and historic financing costs. We have removed these costs from the ITV as these types of costs are covered by the IDC that is allowed for a project.

2.7.2. During their review, GT highlighted a net reduction of £6.4m. This is made up of 24 line items. These are mainly adjustments have been made due to duplicated, mis-stated or updated costs received from the Developer. The various reasons for each item adjustment can be seen in Table 9.

2.7.3. The Developer included generation related met mast costs. We have removed this from the ITV leading to a reduction of £4.5m as this is a cost relating to the generation part of the project.

2.7.4. We have made a reduction of £0.3m for operations and maintenance costs. We have removed these costs from the ITV as they are ongoing costs and not development or construction costs and therefore should not be included in this estimate of cots.

2.7.5. We have made a reduction of £0.2m for the rate applied to staffing allocations. A 50% allocation between generator and transmission had been used by the Developer for certain staff and we did not receive sufficient workings or justification for the 50% allocation. We have therefore reduced these rates to reflect the standard 23% allocation used throughout this Project, based on the overall generator/transmission Capex ratio.

2.7.6. We have made a reduction of £3k identified by the Developer as an incorrect posting for Ofgem tender entry costs.

Interest during construction (IDC)

Table 10 - Adjustments made to the Project's IDC

Cost category	**Submitted cost, (£m)**	**Total adjustment (£m)**	**ITV (£m)**	**Adjustment (£m)**	**Description**
IDC	***80.9***	***-16.7***	***64.2***	***-12.3***	1. Pro-rata reduction following disallowances
				-4.8	2. IDC duration reduction for development phase
				-3.1	3. Change in assets available for use and dates of ION B (more info needed on dates)
				3.5	4. Change in IDC rate to 6.5% and formula correction

2.8. As Table 10 shows, a value of £64.2m has been calculated for the Project's IDC for the ITV. We made a total reduction of £16.7m to the Developer's submitted IDC in the CATRevC and the rationale behind each adjustment is as follows:

2.8.1. a reduction of £12.3m was made to reflect the adjustments made to the project's Capex as part of the ITV process. This reflects the pro rata reduction in the IDC caused by reductions in the development and construction costs.

2.8.2. We reduced the IDC by £4.8m by adjusting the duration of the period pre-FID to reflect what we consider to be an economic and efficient duration. We have compared the duration on this Project to other projects under the DCO process and noted that it was longer than expected. We, therefore, considered that accrual of IDC should not be recognised during this extended period, as the duration was inefficient.

2.8.3. The Developer submitted the IDC using dates that they considered the asset was available for the transmission of electricity. We reviewed the Developer's submission and for the purpose of the ITV, we have taken the dates of the various ION-Bs as the point in time when IDC should cease. This reduced the IDC submission by £3.1m. Should the Developer provide any additional information, we will investigate this further at the FTV stage and review the IDC calculations and the information regarding all activities performed between EON, ION-A and ION-B, in order to establish the point when the transmission assets '*have been safely energised and commissioned*'. The energisation and commissioning of the transmission assets determines when these assets '*are available for use for the transmission of electricity to the onshore network*', which is the point when IDC ceases, in line with our Cost Assessment Guidance (section 3.88).

2.8.4. The final adjustment represents the increase in the IDC to account for correcting errors in the IDC formulas and the incorrect rates of IDC being applied to the early stages of the Project.

2.9. The IDC figure at ITV is estimated at £64.2m and will be reviewed in light of any new adjustments or any further costs that are not included at the FTV stage.