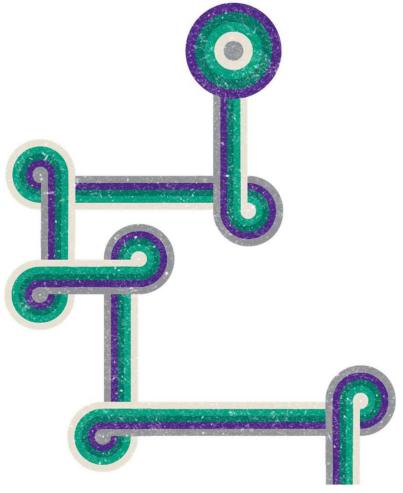
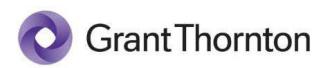


East Anglia ONE Offshore Wind Farm Transmission Assets

Ex-Post Cost Review 21 July 2021





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21 July 2021

Dear Sirs

East Anglia ONE Offshore Wind Farm Transmission Assets

In accordance with our contract call off agreement dated 30 January 2019 and associated task order, we enclose for your attention our report detailing our findings arising from the Ex-Post Cost Review of the East Anglia ONE Offshore Wind Farm Transmission Assets.

Our conclusions and recommendations are included within the Executive Summary set out in section one, however for a full understanding it is necessary to read this in conjunction with our detailed commentary set out in sections 2 to 3 and appendices A to I.

This report is confidential and has been prepared exclusively for Ofgem. Whilst other parties may be interested in receiving a copy of this report, we stress that, to the fullest extent permitted by law, we cannot accept any responsibility whatsoever in respect of any reliance that these parties may place on our report in any decision that they may make in relation to the East Anglia ONE Offshore Wind Farm.

Yours faithfully

Grant Thornton Uk UP

Grant Thornton UK LLP

Chartered Accountants

Member firm within Grant Thornton International Ltd

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Glossary

AC	Alternating current	FID	Final investment decision
ACE	Anticipated Compensation Event	FTV	Final transfer value
AO	Analytical Order	FX	Foreign exchange
AVO	Anticipated Variation Order	GBP	Great British Pound
BAFO	Best and Final Offer	Generation Assets	The generation assets of EA1
BoQ	Bill of Quantities	GIG	Macquarie Green Investment Group
CAT	Cost assessment template	GIS	Gas insulated switchgear
Capex	Capital expenditure	Grant Thornton	Grant Thornton UK LLP
CE	Compensation Event	GRN	Goods Received Note
DECC	Department of Energy and Climate Change	HDD	Horizontal directional drilling
Developer	SPR, ScottishPower Renewables	HSE	Health, Safety and Environment
EAOL	East Anglia ONE Limited	IDC	Interest during construction
East Anglia Zone	The area off the East Anglia coast over which SPR was	ITV	Indicative transfer value
	awarded offshore wind energy development rights by the Crown Estate in 2009	km	Kilometres
EA1/ the Wind Farm	East Anglia ONE offshore windfarm	kV	Kilovolts
EA2	East Anglia TWO offshore windfarm	MW	Megawatt
EA3	East Anglia THREE offshore windfarm	Navantia	Navantia SA
EUR	Euro	Nexans	Nexans Norway AS

Glossary (continued)

NGET National Grid Electricity Transmission plc

Ofgem The Office of Gas and Electricity Markets

OFSS Offshore substation

OFTO Offshore transmission operator

ONCA Onshore export cable

ONSS Onshore substation

OSP Offshore substation platform

PO Purchase order

Prysmian Cables & Systems Limited

Roadbridge Limited

SPR/ ScottishPower

Renewables

ScottishPower Renewables UK Ltd and all of its subsidiaries

Transmission Assets The transmission assets of EA1

UXO Unexploded ordnance

VO Variation order

VolkerInfra Ltd

WDT Weather down time

WTG Wind turbine generator

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- 2. Introduction and background
- 3. The EA1 Ex-Post Cost Review

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Section 1: Executive summary

- 01. Executive summary
- 02. Introduction and background
- 03. The EA1 Ex-Post Cost Review

Executive summary

Introduction

- This report relates to the East Anglia ONE Offshore Wind Farm which is owned by SPR (60%) and GIG (40%) (with SPR leading the construction of the Wind Farm on behalf of the joint venture with GIG)
- EA1 covers an area of approximately 278.5km², consisting of 102 WTGs installed in the southern North Sea, approximately 43km off the coast of Suffolk. With an installed capacity of up to 714MW, the Wind Farm will supply enough energy to power over 630,000 homes
- The EA1 Transmission Assets consist of an AC connection with a single offshore
 collector platform, two cable circuits with a route length of 85km offshore to a
 landfall at Bawdsey, East Anglia and 37km onshore, terminating at an ONSS located
 close to the National Grid ONSS at Bamford
- The construction of the Transmission Assets is complete and the Wind Farm is fully operational, with full export capacity being achieved on July 2020

Grant Thornton review

- Grant Thornton has been instructed by Ofgem to review the ex-post cost assessments prepared by the Developer for the Transmission Assets of the Wind Farm (Ex-Post Cost Review)
- The Ex-Post Cost Review has sought to determine whether the Developer has procedures in place for managing directly and indirectly incurred costs, and to carry out certain testing on whether the Developer's latest assessment of the costs of the Transmission Assets have been incurred as stated. The purpose of this review is to:
 - establish the processes and policies undertaken by the Wind Farm for making payments for directly and indirectly incurred costs
 - in relation to directly incurred costs, for selected contracts, trace expenditure through the purchasing and payments system and reconcile to the costs included on the invoice schedule to the 16 July 2020 CAT

- in relation to indirectly incurred costs, for a sample of transactions, trace
 expenditure through the accounting system, and confirm the amount allocated has
 been correctly applied in accordance with the stated allocation methodology, using
 appropriate metrics in respect of the costs between transmission and generation
- compare the costs included in the 16 July 2020 CAT to the ITV at 24 June 2020, and obtain explanations for significant variances arising between the costs at the two dates
- Our review and this report is based upon the CAT submitted to Ofgem dated 16 July 2020 and incorporates information and explanations provided regarding the costs in this version of the cost template, both from various calls with SPR to discuss the Transmission Assets and processes and in correspondence with the Developer, up to 8 June 2021
- The Developer has prepared CATs setting out their assessment of the costs of the Transmission Assets throughout the development of the Wind Farm. We reviewed an earlier version of the cost template dated 5 July 2019 (the Ex-Ante Cost Review) which culminated in the submission of our report dated 16 October 2020. Our draft report was considered by Ofgem in establishing the project's ITV

Executive summary (continued)

Transmission Assets cost summary

• The 16 July 2020 CAT is summarised below:

Breakdown of Transmission Assets costs

	CAT Reference	24 June 2020 ITV £	16 July 2020 CAT £	Movement £
Offshore substations	CR2			
Submarine cable supply and installation	CR3			
Land cable supply and installation	CR4			
Onshore substation	CR5			
Reactive substation	CR6			
Connection costs	CR7			
Project common costs	CR8			
Transaction costs	CR9			
Total capital costs				
Interest during construction				
Total		715,072,366	746,099,109	31,026,742

- - a £ contract for cable supply and installation

- an overall increase of £ to the contract in relation to the submarine and onshore cable (Landfall and HDDs respectively)
- a fine increase to the EA1 costs of the contract for onshore cable supply and installation
- a £ contract in relation to onshore cable enabling works
- an increase of £ to land agent, land agreements and compensation costs
- has been included in the 16 July 2020 CAT for onshore substation filters. These costs were not included at ITV
- a £ mainly in relation to management fees)
- an increase of £ in relation to construction, marine and commissioning services
- an overall increase of f in relation to project resources
- The full analysis of the variances summarised in the table opposite is presented at Appendix I

Summary of findings

The Wind Farm's payment processes

- Ofgem has instructed us to establish the Wind Farm's processes for making payments to suppliers for directly and indirectly incurred costs
- The Developer has confirmed that all large value contracts for the Wind Farm have been subject to a competitive tendering process. Based upon our review it appears the Developer has suitable systems in place for the approval and payment of invoices to contractors, including contract variations, and has further systems in place to ensure that, where appropriate, the allocation of costs between the Transmission and Generation Assets is properly recorded

Executive summary (continued)

Summary of findings (continued)

Directly incurred costs

- Ofgem has instructed us to carry out certain procedures on the costs payable by the Wind Farm to:
 - Nexans
 - Prysmian
 - Navantia
 - Roadbridge
 - VolkerInfra
- These procedures have been carried out as required and a summary of findings is set out below:

- In total, we have verified direct costs payable by the Wind Farm in relation to five contracts, totalling final million (of the total capital costs) in relation to the Transmission Assets
- We have verified that all costs tested, totalling fine to the deduction of fine comprising amounts disallowed at ITV of fine (including costs relating to EA3 of fine to EA3 of fine to the deduction of fine to the deduction of fine to EA3 of fin
- In addition to the invoices paid of *f* represent forecast costs still to be invoiced under the contracts
- We note that the contract costs included in the 16 July 2020 CAT include f and f respectively of costs that were disallowed by Ofgem at ITV. This is further detailed in Section 3 and Appendix I

Indirectly incurred costs

- Ofgem has instructed us to carry out certain procedures in relation to a sample of indirect costs payable by the Wind Farm
- The Developer has provided a resource planner, which captures all personnel who have worked/are working on EA1 from FID onwards, detailing the expected hours they will spend working on the Transmission Assets, together with hourly rates, and allocated where appropriate, to derive the total expected resources costs for the Transmission Assets.
- We have verified a sample of these costs to underlying records, timesheet reports (listing the personnel, project roles and hours worked, salary journals and SAP postings and where relevant, invoices)
- Costs have been allocated to the Transmission Assets based upon the cost allocation of the role which is either OFTO, Shared or Windfarm (Generation Assets). Shared project resources costs are allocated to the Transmission Assets using the updated indirect allocation rate of \(\begin{align*} \text{\pi} & \text{(previously \begin{align*} \text{\pi} & \text{(submitted at ITV)} \end{align*}. This is further detailed in Section 3

Executive summary (continued)

Summary of findings (continued)

Indirectly incurred costs (continued)

• Our testing in relation to indirect costs (on a random sample of five employees) is summarised below:

Summary of indirect costs testing

Position ID	Staff/ Contractor	May 2019 cost £	Agreed to timesheet /invoice	Agreed to ledger	Agreed to bank
Total					

Conclusion

- Our review of the Wind Farm's processes and procedures has indicated that the
 Developer has suitable policies for the approval and payment of goods and services
 received, including for the allocation of costs where appropriate between the
 Transmission and Generation Assets
- On the basis of our review of the information and the explanations received to date in relation to the sample of directly and indirectly incurred costs that we have been asked to review, we can confirm:
 - that they are supported by invoices, ledgers and bank statements that indicate that they have been incurred or are due; and
 - that the relevant cost is included within the 16 July 2020 CAT

- This is subject to the following four proposed adjustments to the cost of the Transmission Assets:
 - to decrease to reflect the corrected allocation rate for 'Construction Readiness' shared costs
 - to decrease to reflect the corrected allocation rate for 'Construction Readiness' shared costs
 - to decrease for Fisheries costs incurred after the cut off date of 31 March 2020
 - to reflect the updated management fee costs
- These adjustments (a net decrease of f would result in a revised cost of the Transmission Assets (excluding IDC) of f

Recommendations for follow up

- In addition, we recommend that Ofgem should follow up the below with the Developer:
 - the cost allocation rates used in the 16 July 2020 CAT have changed since ITV.
 We recommend that Ofgem review the Developer's classification of new indirect and direct costs between Transmission and Generation Assets, as well as the manual cost allocation rates
 - several costs disallowed by Ofgem at ITV have been resubmitted by the
 Developer in the 16 July 2020 CAT. We recommend that Ofgem should review
 these previously disallowed costs, and the further supporting information
 submitted by the Developer at FTV, to consider whether grounds for exclusion at
 ITV are no longer applicable

Section 2: Introduction and background

- 01. Executive summary
- 02. Introduction and background
- 03. The EA1 Ex-Post Cost Review

Introduction and background

Introduction

Introduction

Instructions

- Grant Thornton has been instructed by Ofgem to prepare a report on our review of
 the cost information and 16 July 2020 CAT for the Transmission Assets of the Wind
 Farm, prepared for Ofgem by the Developer (the Ex-Post Cost Review). This review
 is limited to the procedures set out below, and in particular to a sample of costs which
 have been selected by Ofgem
- This report reflects the 16 July 2020 CAT together with information and explanations received by Grant Thornton up to and including 8 June 2021. Our report does not therefore reflect any information, or the outcome of discussions held after that date

- Throughout the development of the Wind Farm, Ofgem has required the Developer to submit cost templates which set out both the estimated and actual costs that will be or have been incurred in relation to the Transmission Assets
- In late 2019, we conducted reviews of the CAT for the Transmission Assets, based upon the CAT submitted to Ofgem dated 5 July 2019 (the Ex-Ante Cost Review). At that stage, although construction of the Transmission Assets was well under way, as there remained a degree of uncertainty over a number of costs, a contingency provision of feeting (which equated to 6% of the pre-contingency capital costs) was included in the Grant Thornton ex-ante report. The contingency cost remained unchanged at ITV
- Further to the Ex-Ante Cost Review, Ofgem set the ITV in June 2020. This was based upon the Transmission Assets costs included in our draft report (the final version being dated 16 October 2020), and adjusted for particular issues that had been highlighted in our report and through Ofgem's review as follows:

Breakdown of Transmission Assets costs

	CAT Reference	Grant Thornton ex-ante report £	Adjustments per Grant Thornton ex-ante report £	Unsubstantiated costs per Grant Thornton ex-ante report	GT Adjustments not applied at ITV	Ofgem ex-ante adjustments £	24 June 2020 ITV £
Offshore substations	CR2						
Submarine cable supply and installation	CR3						
Land cable supply and installation	CR4						
Onshore substation connection	CR5						
Reactive substation	CR6						
Connection costs	CR7						
Project common costs	CR8						
Transaction costs	CR9						
Total capital costs							
Interest during construction							
Total		807,133,036					715,072,366

Introduction and background

Introduction (continued) and background

Introduction (continued)

- The main purpose of the Ex-Post Cost Review of the Wind Farm's Transmission Assets is to determine whether a sample of costs, selected by Ofgem, which have been included within the 16 July 2020 CAT prepared by the Developer for the Transmission Assets, are appropriately stated, and whether selected costs not directly attributable to either the generation or transmission businesses have been allocated to the Transmission Assets on a reasonable basis. In particular we have been asked to:
 - establish the processes and policies undertaken by the Wind Farm for making payments to suppliers for directly and indirectly incurred costs
 - in relation to directly incurred costs, for selected contracts, trace expenditure from the cash flow schedule to the contract, the invoice and the accounting ledgers of the Wind Farm, and to bank statements, and reconcile the costs included on the invoice schedule to the 16 July 2020 CAT
 - in relation to indirectly incurred costs, for a sample of transactions, trace from the 16 July 2020 CAT to journal entries made on the accounting system, and confirm the amount allocated has been determined as prescribed in the stated allocation methodology, using appropriate metrics in respect of the allocation of costs between transmission and generation
 - compare the costs in the 16 July 2020 CAT to the costs at ITV, and obtain explanations for variances between the costs at the two dates
- If further information is produced and brought to our attention after service of this report, we reserve the right to revise our conclusions as appropriate
- This work does not constitute an audit performed in accordance with Auditing Standards
- Except to the extent set out in this report, we have relied upon the documents and
 information provided to us as being accurate and genuine. To the extent that any
 statements we have relied upon are not established as accurate, it may be necessary to
 review our conclusions

 The figures and tables in this report have been prepared using Microsoft Excel. The report may therefore contain minor rounding adjustments due to the use of computers for preparing certain calculations

Background

- EA1 is part of the wider East Anglia Zone, which has a total planned capacity of up to 7,200MW and is divided into four sub-projects; EA1, EA3 and East Anglia ONE North and EA2 which are still in the development process
- EA1 is the first project that will be built in the East Anglia Zone (although EA3 received its development consent order in August 2017). The project company, EAOL, has developed the Wind Farm and is owned by SPR (60%) and GIG (40%)
- The EA1 site covers approximately 278.5km² consisting of 102 WTGs installed in the English southern North Sea, approximately 43km off the coast of Suffolk. With an installed capacity of up to 714MW, the Wind Farm will supply enough energy to power over 630,000 homes
- The Transmission Assets primarily comprise one OFSS, two offshore export cables with route lengths of approximately 85km to the onshore transition joint bays located back from the shoreline and two onshore export circuits with route lengths of approximately 37km from the onshore transition joints to an ONSS. Two 400kV cables connect the ONSS to the existing 400kV bay at the NGET substation, with an approximate length of 550 metres. The connection is via a single bay of the 400kV GIS within the existing NGET substation
- The OFSS is located approximately in the middle of the Wind Farm. 12 inter-array cable strings feed into the OFSS and two parallel submarine export cables will be routed towards the South West
- The offshore export cables connect to the onshore cables via an HDD at the cable landfall near Bawdsey, in East Anglia. The overall onshore export cable route will terminate at an ONSS close to the National Grid main ONSS at Bramford
- The construction of the Transmission Assets is complete, with commissioning being achieved in March 2020. The Wind Farm is fully operational and full export capacity was achieved on July 2020

Section 3: The HOW01 Ex-Post Cost Review

- 01. Executive summary
- 02. Introduction and background
- 03. The EA1 Ex-Post Cost Review

The HOW01 Ex-Post Cost Review

The Wind Farm's financial processes

Ex-Post Cost Review

- The main purpose of the Ex-Post Cost Review is set out in Section 2
- The 16 July 2020 CAT for the Transmission Assets of the Wind Farm is summarised below:

Breakdown of Transmission Assets costs

	CAT Reference	24 June 2020 ITV £	16 July 2020 CAT £	Movement £
Offshore substations	CR2			
Submarine cable supply and installation	CR3			
Land cable supply and installation	CR4			
Onshore substation	CR5			
Reactive substation	CR6			
Connection costs	CR7			
Project common costs	CR8			
Transaction costs	CR9			
Total capital costs				
Total		715,072,366	746,099,109	31,026,742

Accounting systems

- The Developer has confirmed that there have been no changes in the accounting system since our Ex-Ante Cost Review
- All costs of the Wind Farm are posted to the SAP accounting system. Costs have been grouped dependent on the cost activity that they relate to and whether they relate entirely to the Transmission or Generation Assets, or to the Wind Farm as a whole (shared costs)

Cost allocations

- Where project costs are not fully attributable to the Transmission Assets, ie they relate
 to the Wind Farm as a whole (shared costs), estimates have been made of the
 proportion of the costs that should be attributed to the Transmission Assets based on
 the nature of the shared costs
- Shared costs are typically indirect costs which are for the general benefit of the overall project and include:
 - general project management and administration
 - project support functions eg procurement, cost control, health and safety
 - general consultants eg legal, environment and consent
 - office rent, heating, lighting and corporate services
 - cross-package management resources eg document control, planning etc
 - stakeholder engagement costs, events
- Shared costs are allocated using manually assessed allocation or general allocation (% based)
 - Shared (manual allocation): costs where the scope of work spans across both the Generation and Transmission assets and the invoice/final account can be split between the Generation and Transmission assets or a specific methodology for apportioning costs between the Generation and Transmission assets can be applied, eg UXO and benthic surveys, UXO disposal, commissioning services and marine services. As it is not always clear at the outset of the contract what portion of the costs will ultimately relate to one element or the other, these costs are allocated on a case by case basis once the contract's scope has been finalised
 - Shared (general allocation): costs which cannot be accurately allocated between
 the Generation and Transmission Assets, so have been allocated on a pro-rata
 basis. These have been separated into two distinct categories of spend, direct
 capex, eg turbines, offshore cable and indirect capex, eg resources

The Wind Farm's financial processes (continued)

Cost allocations (continued)

- The table below summarises the allocated costs included within the 16 July 2020 CAT, and the effective allocation rate for such costs

Allocated costs - FTV

	Total £	Allocation £	Effective rate %
Indirect shared cost			%
Direct shared cost			%
Manually allocated shared cost			%
Total			%

• As identified in our ex-ante report, the effective total average allocation rate derived (although slightly lower at FTV at 10%) is much higher than we have seen on previous projects. However, we note that the high rate is largely driven by the manually allocated shared costs which account for £ (of the total shared costs of £ (of the total shared costs of £ (of the total shared further below)

Update to cost allocations at FTV

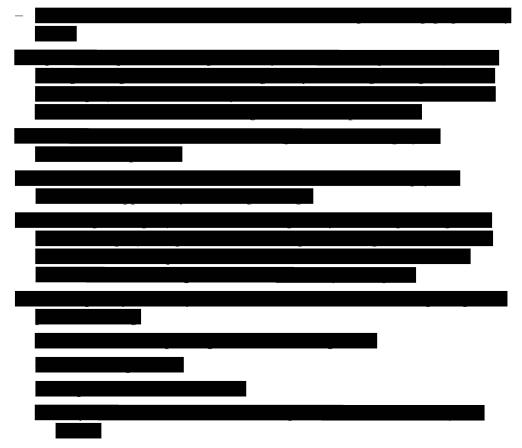
 During the ITV process, Ofgem reviewed the method used to apportion direct and indirect shared costs between the Transmission and Generation Assets. Ofgem reclassified some of the costs and therefore recalculated the percentages used

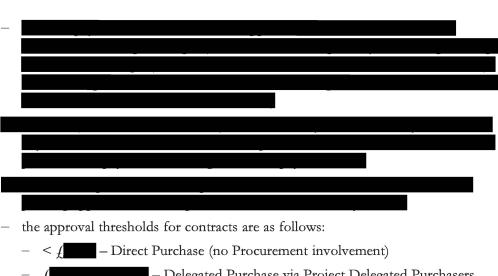
- As a result, at ITV the allocation rate for indirect costs decreased from % to % and the allocation rate for direct costs increased from % to
- Since ITV, the costs have increased, new costs have been incurred and contingency has been removed, which has resulted in the allocation percentages changing at FTV. The Developer has applied the same methodology as Ofgem did at ITV, with the same classification of costs between the Transmission and Generation Assets. However, we note that there are costs that are new at FTV and therefore the classification of these has not been reviewed. We therefore recommend that Ofgem review the Developer's classification of these new costs
- The effective allocation rate of the manually allocated shared costs has increased from % (at ex-ante) to %, with £ of manually allocated costs being included in the 16 July 2020 CAT (compared to £ at ex-ante). This increase is despite the total manually allocated shared costs decreasing from £ (at ex-ante) to £
- The Developer has provided a schedule which details each of the different methods of manually allocated shared costs, including supporting calculations. We note that the manually allocated costs also include f of costs that are 100% OFTO (however were originally set up as a shared cost in SAP). Excluding these, the effective allocation rate is
- Further, the Developer has proposed an adjustment to correct the manual allocation rate of This adjustment is for a decrease of f (split f) in relation to CR2 and fin relation to CR3). Applying this adjustment, further decreases both the effective allocation of the manually allocated shared costs to % and the effective total average allocation rate to %
- We recommend that Ofgem instruct technical advisors to assess the reasonableness of the various manual cost allocation rates applied

The Wind Farm's financial processes (continued)

Process for making payments

- The main process used by the Developer for making payments for both directly and indirectly incurred costs is set out below:
 - as identified in our ex-ante report, one of the tools used by the Wind Farm in achieving value for money is a competitive tendering process which was reviewed in that report





- A
 Delegated Purchase via Project Delegated Purchasers (either the Package Manager or an individual delegated by the Package Manager with SAP access rights)
- > ℓ Central Procurement Team
- every invoice request over f must be authorized

The HOW01 Ex-Post Cost Review

The Wind Farm's financial processes (continued) and review of directly incurred costs

Process for making payments (continued)



Contract variations

• The Developer has confirmed that the process for payment of contract variations is the same as for the general invoice system set out above

Review of directly incurred costs

• Ofgem has selected the following contracts of directly incurred costs for review:

Summary of directly incurred costs selected for testing

	CAT Reference	16 July 2020 CAT £	% of total Transmission Asset capital costs
Nexans	CR3		%
Prysmian	CR4		%
Navantia	CR2		%
Roadbridge - ONCA	CR4		%
Roadbridge - ONSS	CR5		%
VolkerInfra	CR3/CR4		%
Total			%
Total capital costs per CAT			

- Ofgem has directed that our work in relation to these contracts covers the following:
 - trace expenditure from the cash flow schedule to the relevant contract or other source record, and from the contract trace to an invoice(s) or journal;
 - trace the invoice through the purchasing system;
 - trace the invoice through to the payment system; and
 - trace the payments through to the bank account

Summary of direct costs testing

Invoices Accrued Amounts Non-OFTO Total p paid amounts removed at ITV/ amounts 16 July 202 £ £ Removal of EA3 £ CA costs £	amounts	removed at ITV/ Removal of EA3 costs	amounts	paid	
£ £ Removal of EA3 £ CA costs		Removal of EA3 costs			
costs	£	costs	£	£	
costs		costs			
		-			
	-	-			
	-				
	_				
	_	-			
	-				
					T ()
Total Control					Total

 Our findings are summarised in the table above and our testing in relation to these contracts is further detailed below

Invoices paid

- For each of the five contracts selected by Ofgem, we obtained a schedule of all invoices paid under the contract and agreed the invoices recorded on the schedules to the underlying invoice. In addition, we agreed all amounts to the purchase ledger and the payment of each to bank statements
- The detailed testing of invoices paid for each of the five contracts is set out in Appendices B to G
- Our review of invoices paid by the Developer (totalling *f* relating to the five contracts selected by Ofgem, confirmed payment to the contractor and raised no areas of concern

Review of directly incurred costs (continued)

Review of directly incurred costs (continued)

Accrued amounts

• Accrued amounts totalling frequency represent the remaining costs payable in relation to each of the contract. At the time of our review these forecast costs were still to be invoiced and paid (as at the 9 July 2020)

Amounts removed at ITV / Removal of EA3 costs

- Amounts removed at ITV represent amounts that were disallowed by Ofgem at the ITV and have not been resubmitted in the 16 July 2020 CAT, being:
 - in relation to the contract for EA3 sub duct costs disallowed at ITV
 - in relation to the contract consisting of fine relation to costs disallowed at ITV, primarily relating to J tubes, and for the impact of the generator related equipment on the OSP structure. We note that Ofgem disallowed fine at ITV (as a results of its calculation taking into account the information provided at that date by the Developer). At ITV, the Developer highlighted that it wished to submit further analysis related to the contribution of generation related assets to the cost of the OSP at FTV and as such, at FTV the Developer has only deducted fine and has provided a calculation in support of this amount. We therefore recommend Ofgem review the Developer's updated calculation
 - £ in relation to the contract for EA3 costs
 - in relation to the contract for EA3 costs

Non-OFTO amounts

 Amounts not related to the Transmission Assets represent amounts paid to contractors which related to the Generation Assets of the total contract costs of £ (being £ n invoiced and paid and £ still to be invoiced (as at 20 July 2020)), £ relates directly to the Generation Assets and is therefore not included in the 16 July 2020 CAT

Costs disallowed at ITV

- We note that the 16 July 2020 CAT includes f of contract costs and f of contract costs that were disallowed by Ofgem at ITV and have been resubmitted by the Developer at FTV
- Of the costs:
 - is the difference between the £ excluded by Ofgem at ITV in relation to the impact of the generator related equipment on the OSP structure and the Developer's updated calculation at FTV of £ (see opposite)
 - relates to WDT incurred during the installation window nominated by the Developer. These costs were disallowed at ITV and have been included in full by the Developer at FTV
- Of the costs:
 - relates to anticipated spend disallowed at ITV (and included within the unsubstantiated costs in the Grant Thornton ex-ante report)
 - Electric relates to costs disallowed by Ofgem at ITV which the Developer considers relate to EA1 and therefore should be included in the 16 July 2020 CAT
- These amounts are further detailed in Appendix I

Review of indirectly incurred costs and movements in the cost assessment

Review of indirectly incurred costs

Project management costs

- Ofgem has directed that our work in relation to project management costs covers the following:
 - select a random sample of five employees
 - agree costs from each individuals timesheet to the system
 - agree corresponding invoice payment to bank statements (for contractors)
- Our detailed testing in relation to project management costs is set out in Appendix H, and our findings are summarised in the below table:

Summary of indirect costs testing

Position ID	Staff/ Contractor	May 2019 cost £	Agreed to timesheet /invoice	Agreed to ledger	Agreed to bank
					i
Total					_

- Our testing of project management support services costs demonstrated that costs have been paid as stated
- For the avoidance of doubt, we have not verified the suitability of the hourly rates charged to the project by the Developer

Movements in the cost assessment

• The movements between the ITV set on 24 June 2020 and the most recent cost assessment in the 16 July 2020 CAT are summarised in the following table:

Breakdown of Transmission Assets costs

	CAT Reference	24 June 2020 ITV £	16 July 2020 CAT £	Movement £
Offshore substations	CR2			
Submarine cable supply and installation	CR3			
Land cable supply and installation	CR4			
Onshore substation	CR5			
Reactive substation	CR6			
Connection costs	CR7			
Project common costs	CR8			
Transaction costs	CR9			
Total capital costs				
Interest during construction				
Total		715,072,366	746,099,109	31,026,742

- The 16 July 2020 CAT reflects a net increase in the cost of the Transmission Assets of £31.03 million from the 24 June 2020 ITV, as a result of a £ increase in capital costs and interest during construction increasing by £ increase.
- The net increase in capital costs of fine includes the release of all contingency provisions, totalling fine which are no longer required at FTV. Excluding the contingency release, capital costs have increased by fine following page.

 The principal reasons for this net increase are detailed on the following page

Movements in the cost assessment and Impact of Cost Assessment Review

Movements in the cost assessment (continued)

- a £ increase to the contract in relation to the offshore substation as a result of £ additional contract variations and £ of costs disallowed at ITV which have been resubmitted in the FTV CAT
- a fine increase to the contract for cable supply and installation in relation to increased dredging costs and additional claims
- an overall increase of £ to the contract in relation to the submarine and onshore cable
- a f increase to the EA1 costs of the contract for onshore cable supply and installation, primarily in relation to new installation CEs raised since ITV
- a flower increase to the contract in relation to enabling works as a result of costs disallowed at ITV which have been resubmitted in the FTV CAT
- an increase of figures to land agent, land agreements and compensation costs as a result of figures of costs disallowed at ITV which have been resubmitted in the 16 July 2020 CAT and figures of land payments beyond divestment (2021 to 2025)
- £ has been included in the 16 July 2020 CAT for onshore substation filters. These costs were not included at ITV
- a £ increase in overheads and general costs (mainly in relation to management fees)
- an increase of figures in relation to construction, marine and commissioning services including figures of costs disallowed at ITV which have been resubmitted in the 16 July 2020 CAT
- The full analysis of the variances is presented at Appendix I

Impact of Cost Assessment Review

- Following our review of the 16 July 2020 CAT, as detailed above, we propose the following adjustments to the 16 July 2020 CAT:
 - to decrease to reflect the corrected allocation rate for 'Construction Readiness' shared costs
 - to decrease to reflect the corrected allocation rate for 'Construction Readiness' shared costs
 - to decrease for Fisheries costs incurred after the cut off date of 31 March 2020
 - to decrease to reflect the updated management fee costs included within 'Overheads & General Costs'
- These four adjustments would result in a net decrease of £ and a revised cost of the Transmission Assets (excluding IDC) of £

Recommendations for follow up

- As highlighted above and further detailed in Appendix I, several costs disallowed at ITV have been resubmitted in the 16 July 2020 CAT. This includes for in relation to the several costs and for a contract costs in relation to the impact of the generator related equipment on the OSP structure. We recommend that Ofgem should review these previously disallowed costs and updated information provided by the Developer to consider whether the grounds for exclusion at ITV are still applicable
- As a result of increased costs, new costs being incurred and the removal of contingency since ITV, the allocation rates used in the 16 July 2020 CAT are different from those agreed by Ofgem at ITV. We recommend that Ofgem should review the classification of the new costs between Transmission and Generation Assets, as well as the methodology for the manual cost allocations

Appendices

- A. Restrictions on circulation, disclosures of interest, forms of report and information relied on
- B. Nexans invoice review
- C. Prysmian invoice review
- D. Navantia invoice review
- E. Roadbridge (ONCA) invoice review
- F. Roadbridge (ONSS) invoice review
- G. VolkerInfra invoice review
- H. Indirect costs review
- I. Movements between the cost templates



Appendices

A. Restrictions on circulation, disclosures of interest, forms of report and information relied on

Restriction on circulation

- Grant Thornton does not accept or assume responsibility, duty of care, liability or other obligation to any third party other than Ofgem who, as a result, either directly or indirectly, of disclosure of the whole or any part of this report by Ofgem, receives, reads or otherwise obtains access to this document. Any party relying on this report does so entirely at their own risk
- In the preparation of our report, Grant Thornton has been provided with material by Ofgem (and by third parties at Ofgem's request) relating to third parties. We have relied upon warranties and representations provided by Ofgem that it is fully entitled to disclose such information to us for inclusion within our report, free of any third party rights or obligations, and that Ofgem will only permit circulation of this report in accordance with any rights to confidentiality on the part of any third party. Any objections to the inclusion of material should be addressed to Ofgem. Accordingly, Grant Thornton acknowledges no duty or obligation to any party in connection to the inclusion in the report of any content referring to any third party material or the accuracy of such material

Disclosures of interest

• To the best of our knowledge, we have no connections with any of the parties or advisors involved in this matter, beyond normal commercial relationships, which would influence our report in any way

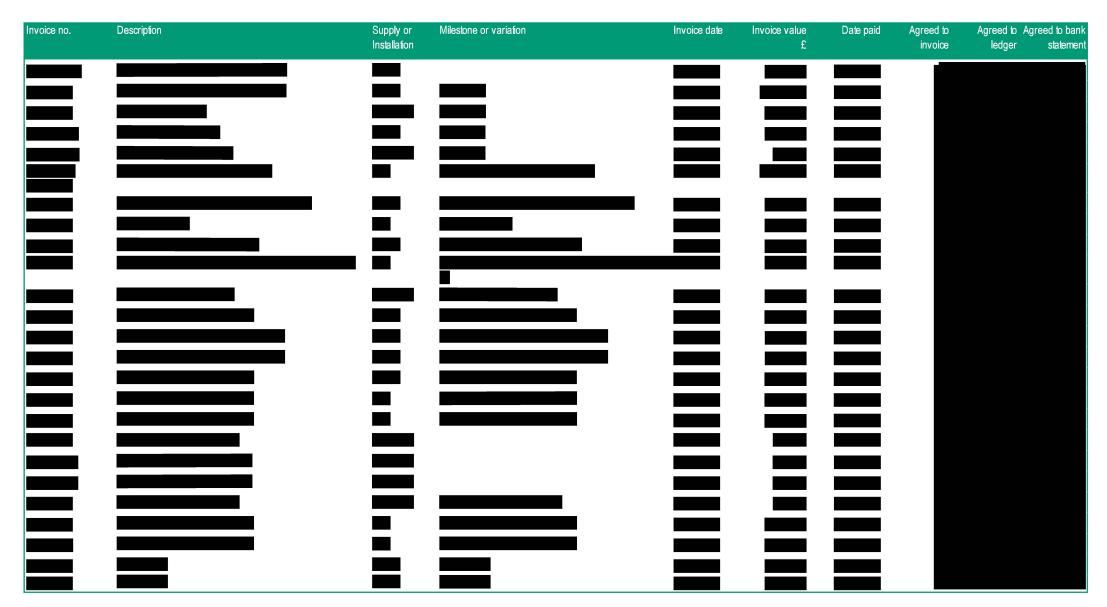
Forms of report

• For your convenience, this report may have been made available to recipients in electronic as well as hard copy format. Multiple copies and versions of this report may therefore exist in different media and in the case of any discrepancy, the final signed electronic copy should be regarded as definitive

Information relied on

- Grant Thornton has relied upon the following information in reviewing the cost assessment for the Wind Farm's Transmission Assets:
 - the 16 July 2020 CAT, which includes actual costs incurred up to 30 June 2020 and accrued costs that will be incurred from that date up to the closing out of all contracts
 - schedules of invoices prepared for the contracts selected for review by Ofgem, together with copies of invoices, bank statements and ledgers showing payments of the invoices recorded
 - schedules providing supporting information for the internal project management costs with copies of invoices (where applicable) and bank statements showing payments of the costs
 - information and explanations provided to us by the Developer. This included various calls with SPR to discuss the Transmission Assets and processes, and subsequent email correspondence, up to 8 June 2021, with staff responsible for the preparation of the 16 July 2020 CAT

B. Nexans invoice review



B. Nexans invoice review (continued)

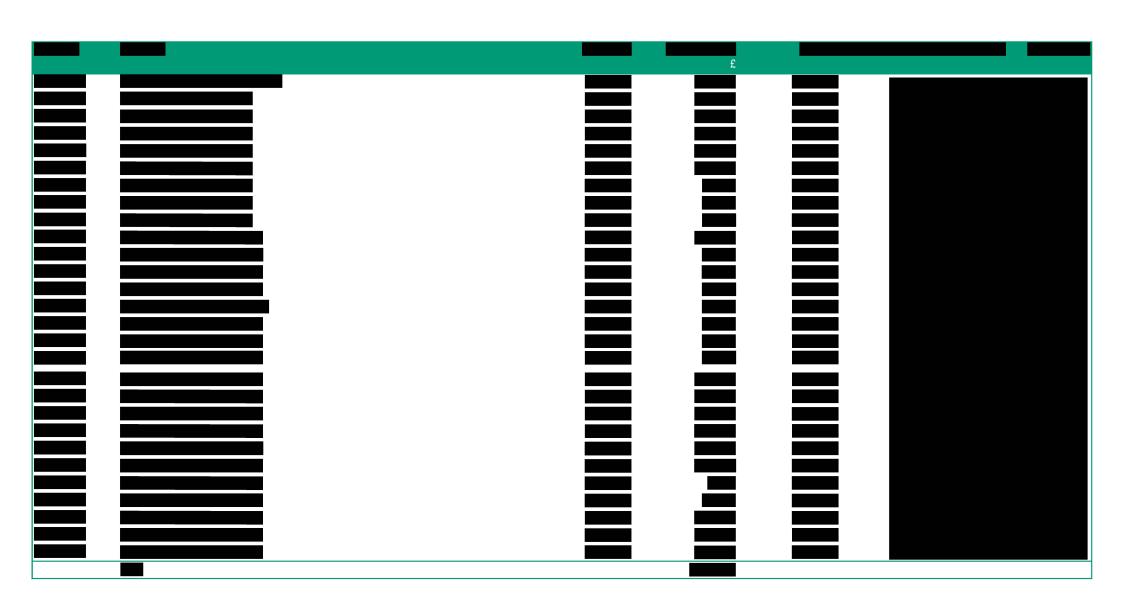


B. Nexans invoice review (continued)

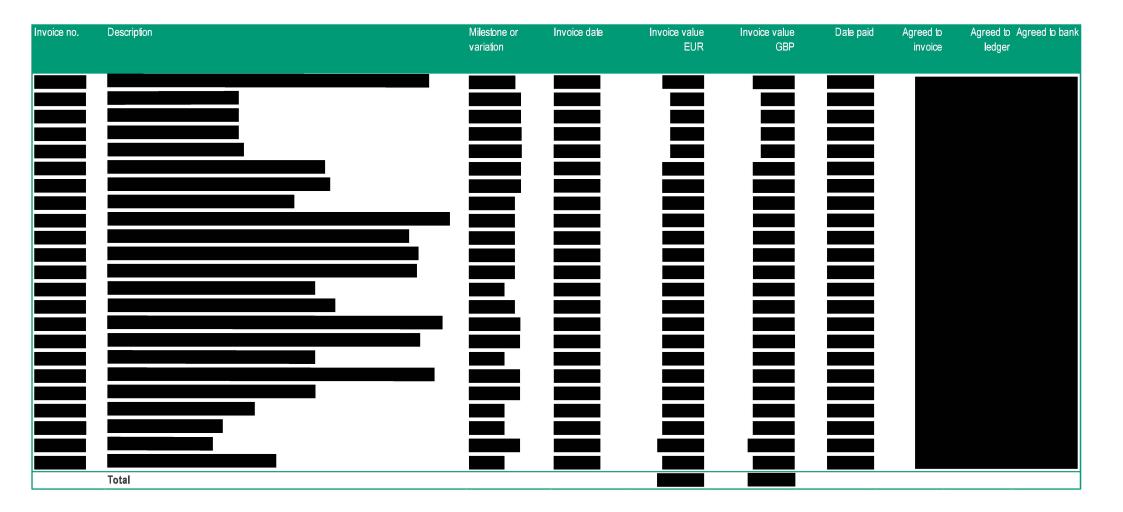


B. Nexans invoice review (continued)





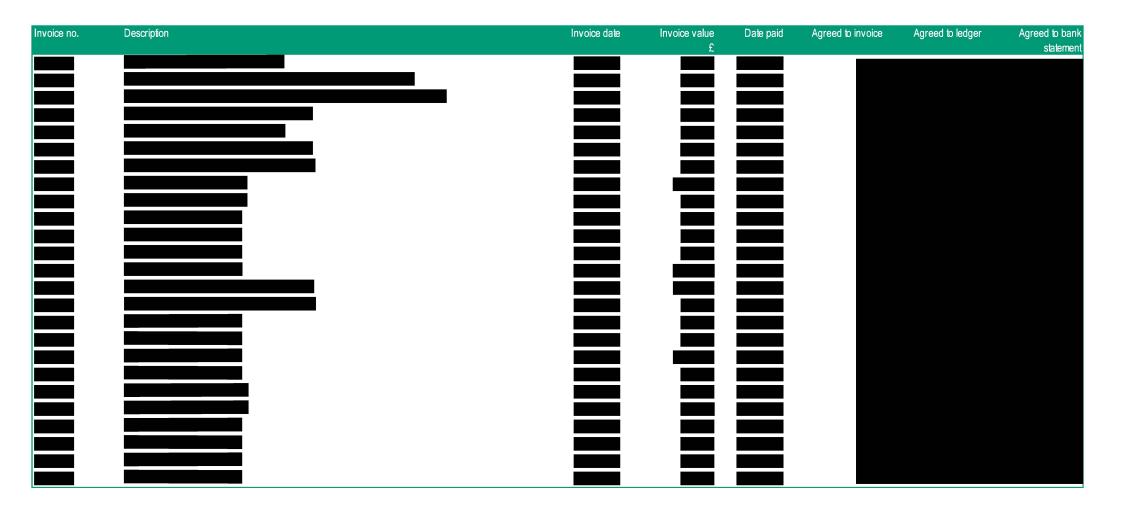
D. Navantia invoice review



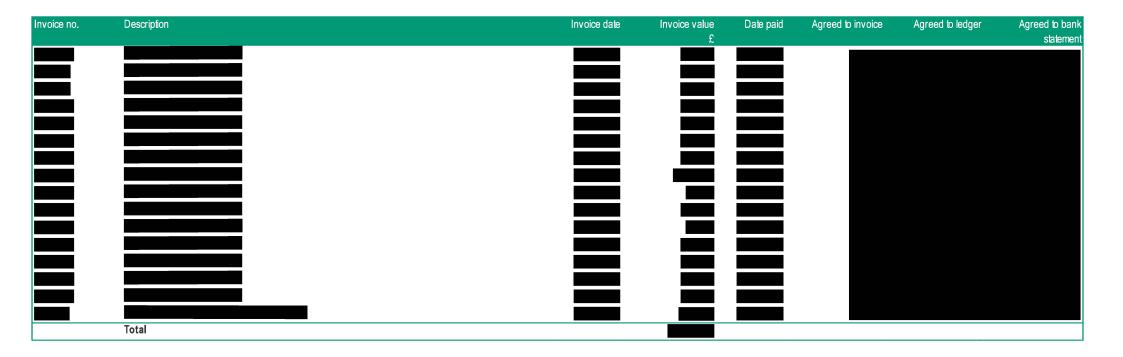
E. Roadbridge (ONCA) invoice review

Invoice no.	Description	Invoice date	Invoice value £	Date paid	Agreed to invoice	Agreed to ledger	Agreed to bank statement

E. Roadbridge (ONCA) invoice review (continued)



E. Roadbridge (ONCA) invoice review (continued)



F. Roadbridge (ONSS) invoice review

Invoice no.	Description	Invoice date	Invoice value £	Date paid	Agreed to invoice	Agreed to ledger	Agreed to bank statement

F. Roadbridge (ONSS) invoice review (continued)

Invoice no.	Description	Invoice date	Invoice value	Date paid	Agreed to invoice	Agreed to ledger	Agreed to bank
			£				statement
	Total						

G. VolkerInfra invoice review

Invoice no.	Description	Payment Cerificate No.	Invoice date	Net invoice value £	Date paid	Agreed to invoice	Agreed to ledger	Agreed to bank statement

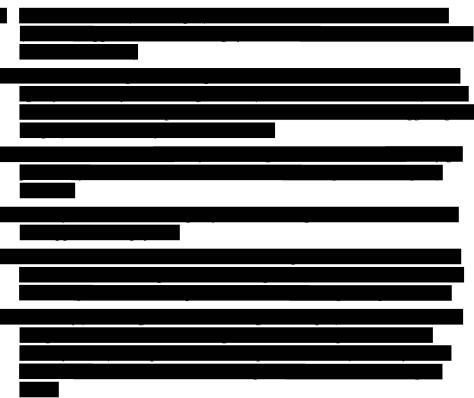
G. VolkerInfra invoice review (continued)

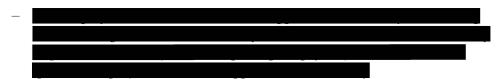
Invoice no.	Description	Currency	Invoice date	Net invoice value £	Date paid	Agreed to invoice	Agreed to ledger	Agreed to bank statement
	Total							

H. Indirect costs review

Project management costs

• The Developer has outlined the process for allocating project management costs to the Transmission Assets. There is one timesheet system, however the process differs for internal staff compared to contractors as follows:

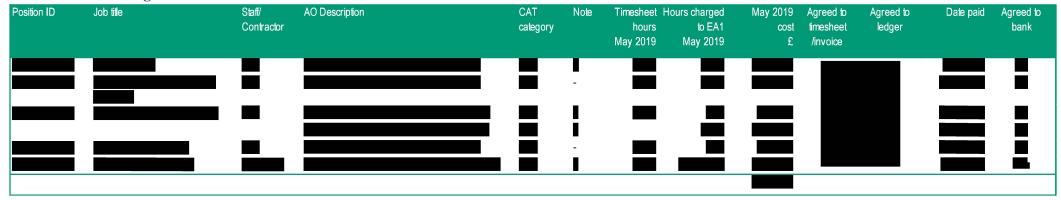




- As instructed by Ofgem, we selected a sample of five individuals to test the above process
- The Developer has provided details from these five individuals' timesheet records. We have traced these to the posting on the system and, for contractors, to the invoice and being paid as set out in the table on the following page

H. Indirect costs review (continued)

Indirect costs testing





I. Movements between the cost templates

• We have been instructed to compare the total Transmission Asset costs as set out in the 16 July 2020 CAT with the total Transmission Asset costs included within the ITV at 24 June 2020, and to obtain explanations for cost variances between the two dates. The movement is summarised in the table below:

Breakdown of Transmission Assets costs

	CAT Reference	24 June 2020 ITV £	16 July 2020 CAT £	Movement £
Offshore substations	CR2			
Submarine cable supply and installation	CR3			
Land cable supply and installation	CR4			
Onshore substation	CR5			
Reactive substation	CR6			
Connection costs	CR7			
Project common costs	CR8			
Transaction costs	CR9			
Total capital costs				
Interest during construction				
Total		715,072,366	746,099,109	31,026,742

• We have sought explanations from the Developer for the significant movements in each of the cost categories and these are set out on the following two pages

Offshore substation

- Offshore substation costs have increased by a net amount of f as a result of:
 - above, we have agreed that the contract (with the exception of £ still to be invoiced). The increased costs are as a result of:
 - f of additional contract variations raised since ITV
 - of costs disallowed at ITV which have been resubmitted by the Developer in the 16 July 2020 CAT.

 WDT which Ofgem disallowed at ITV due to insufficient information regarding the commissioning activities and their timings. The Developer has resubmitted these at FTV along with further evidence for Ofgem to review.

 I relates to the impact of the generator retained assets on the OSP. At ITV, Ofgem calculated this to be

 Note The Developer has provided an updated calculation and as such only excluded

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 which have been resubmitted by the Developer has relates to the impact of the generator retained assets on the OSP.

 The Developer has provided an updated calculation and as such only excluded

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 - of the which was disallowed by Ofgem at ITV. The Developer disagrees with the disallowed cost and has resubmitted the finite in the 16 July 2020 CAT, on the basis and the Developer will propose an adjustment if required
 - an increase of fine in relation to 'as a result of a new AO number since ITV for commissioning costs. We have reviewed the cost breakdown and note that all invoices are individually below fine and therefore no further work has been performed

I. Movements between the cost templates (continued)

Offshore substation (continued)

- a function increase in project resources costs (relating to the offshore substation) as a result of a function increase due to a number of job roles being identified by Ofgem at ITV to be moved from CR8 directly into the packages which was partially offset by a function decrease due to a number of forecast job roles not being filled and some roles finishing earlier than forecast at ITV
- the release of the £ contingency provision no longer required at FTV Submarine cable supply and installation
- Submarine cable supply and installation costs have decreased by a net amount of figure 1, primarily as a result of:
 - a £ contract due to increased dredging costs
 and additional claims
 - have increased by a net amount of £ as the contract costs included in CR4 have increased by £ due to both additional costs for CE's raised at ITV and new CE's raised since ITV. As set out in Section 3 above, we have agreed that the costs included in the 16 July 2020 CAT reflect the final costs of the contract (with the exception of £ still to be invoiced). We also note that the same EA1/EA3 split methodology as agreed at ITV has been applied
 - an increase of f in relation to costs were disallowed at ITV (and included within the unsubstantiated costs in the Grant Thornton ex-ante report). The Developer has now provided third party evidence and therefore resubmitted f of these costs at FTV
 - a £ increase in project resources costs (relating to submarine cable)
 primarily as a result of a number of job roles being identified by Ofgem at ITV to be moved from CR8 directly into the packages

- a f increase in 'costs. However, since preparing the 16 July 2020 CAT, the Developer has realised that should have had a cut off date of 31 March 2020 and therefore proposes an adjustment to reduce the 16 July 2020 CAT by f
- relates to a new AO number since ITV for UXO disposal costs and £ relates to the application of an incorrect manual allocation rate to UXO and benthic survey costs and therefore the Developer has proposed an adjustment to decrease the costs included in the 16 July 2020 CAT by this amount (along with a similar adjustment to decrease costs included in CR2 by £ as detailed in Section 3)
- the release of the £ contingency provision no longer required at FTV

Land cable supply and installation

- Land cable supply and installation costs have increased by a net amount of financial, primarily as a result of:
 - a £ increase to the EA1 costs of the contract for onshore cable supply and installation, primarily in relation to new installation CE's raised since ITV. As set out in Section 3 above, we have agreed that the costs included in the 16 July 2020 CAT reflect the final costs of the contract (with the exception of £ still to be invoiced)
 - a £ increase in contract costs as these were disallowed at ITV and have been resubmitted by the Developer in 16 July 2020 CAT. As detailed in Section 3, £ relates to anticipated spend disallowed at ITV (and included within the unsubstantiated costs in the Grant Thornton ex-ante report) and £ relates to costs disallowed by Ofgem at ITV which the Developer considers relate to EA1 and therefore should be included in the 16 July 2020 CAT
 - a £ contract costs as detailed opposite

I. Movements between the cost templates (continued)

Land cable supply and installation (continued)

- a flavored increase in land costs due to the Developer resubmitting costs that were disallowed at ITV, being flavored land costs relating to periods after the date of first power, and flavored of land payments beyond divestment (2021 to 2025)
- a flavores in legal costs based on the estimated costs in relation to the outstanding work to close contracts
- a fine increase in project resources costs (relating to the onshore cable) as a result of a fine increase due to a number of job roles being identified by Ofgem at ITV to be moved from CR8 directly into the packages which was partially offset by a fine decrease due to resource allocation to EA3 (following the same methodology as agreed at ITV)
- a £ increase for an updated estimate of landscaping costs. The Developer has explained the contract is close to signature
- decrease to contract costs of which *f* relates to EA1 (and the 16 July 2020 CAT)
- a flower decrease in contract costs as a result of increased allocation of shared costs to EA3
- the release of the £ contingency provision no longer required at FTV

Onshore substation

- Onshore substation costs have increased by a net amount of £ primarily as a result of:
 - £ in relation to filters which may be required as the harmonic studies yet to be carried out. Filters were not included at ITV
 - a £ contract costs as a result of new
 CE's raised since ITV
 - the release of the *f* contingency provision no longer required at FTV

- a f increase in project resources costs (relating to the onshore substation) as a result of a f increase due to a number of job roles being identified by Ofgem at ITV to be moved from CR8 directly into the packages which was partially offset by a f decrease due to a number of forecast job roles not being filled and some roles finishing earlier than forecast at ITV
- a £ costs as a result of new CE's raised since ITV

Reactive substation

• Reactive substation costs have increased by a net amount of £ , of which the only significant movement relates to additional variations to the contract since ITV totalling £

Connection costs

• Connection costs have increased by a net amount of *f* , primarily as a result of *f* HSE and consents costs which were disallowed at ITV (and included within the unsubstantiated costs in the Grant Thornton ex-ante report) but have been resubmitted in the 16 July 2020 CAT as the Developer has now provided back up to support the

Project common costs

- Project common costs have increased by a net amount of £ primarily as a result of:
 - a f increase in overheads and general costs. Of the f included in the 16 July 2020 CAT
 - relates to management fees (which were disallowed at ITV as no supporting evidence was provided). Management fee costs relate to external staff and include costs of HR, procurement, office costs. The Developer has provided a breakdown of feet and as such proposes an adjustment to decrease the 16 July 2020 CAT by feet for the difference

I. Movements between the cost templates (continued)

Project common costs (continued)

- relates to various AO numbers for costs such as communications, rent and rates, office overheads. The Developer has provided a breakdown of these 'for costs such as provided a breakdown of these 'for costs such as provided a breakdown of these 'for costs such as provided a breakdown of these 'for costs such as provided a breakdown of these 'for costs such as provided a breakdown of these 'for costs such as provided a breakdown of these 'for costs such as provided a breakdown of these 'for costs such as provided a breakdown of these 'for costs such as communications, rent and rates, office overheads. The Developer has provided a breakdown of these 'for costs such as communications, rent and rates, office overheads. The Developer has provided a breakdown of these 'for costs such as communications, rent and rates, office overheads. The Developer has provided a breakdown of these 'for costs such as contract the forecast (in total) at ITV has reduced and further at FTV these cost have been allocated at 'for costs such as costs and for costs such as costs and for costs such as costs and for costs and for costs such as costs and costs are costs are costs and costs are costs and costs are costs are costs and costs are costs are costs are costs and costs are costs
- a f increase in Construction, Marine & Commissioning Services. The Developer has resubmitted in the 16 July 2020 CAT the f of costs disallowed at ITV (and included within the unsubstantiated costs in the Grant Thornton ex-ante report). I of the increased costs relates to AO numbers which existed at ITV and a further f relates to new AO numbers created since ITV. We have been provided with a breakdown of the Construction, Marine & Commissioning Services costs and have agreed invoice amounts over f to supporting documentation
- a £ increase in legal costs based on the estimated costs in relation to the outstanding work to close contracts
- a fine increase in pre-FID development expenditure as a result of the updated cost allocation rates (as discussed in Section 3)
- a net decrease of f project resources costs (relating to project common costs) as a result of the a number of job roles being identified by Ofgem at ITV to be moved from CR8 directly into the packages along with the indirect allocation rate for shared project resources decreasing from at ITV to at FTV (as detailed in Section 3)
- the release of the f contingency provision no longer required at FTV

Transaction costs

Transaction costs have increased by a net amount of feeting, of which the only significant movement relates to legal costs. Legal costs have increased by feeting to reflect the latest cost estimate provided by the legal costs were disallowed by Ofgem at ITV. However, the Developer considers the disallowed costs at ITV were too high (as supported by the cost estimate)

Interest during construction

• Interest during construction has increased by £ . As this is outside the scope of this review no further work has been performed in this area



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