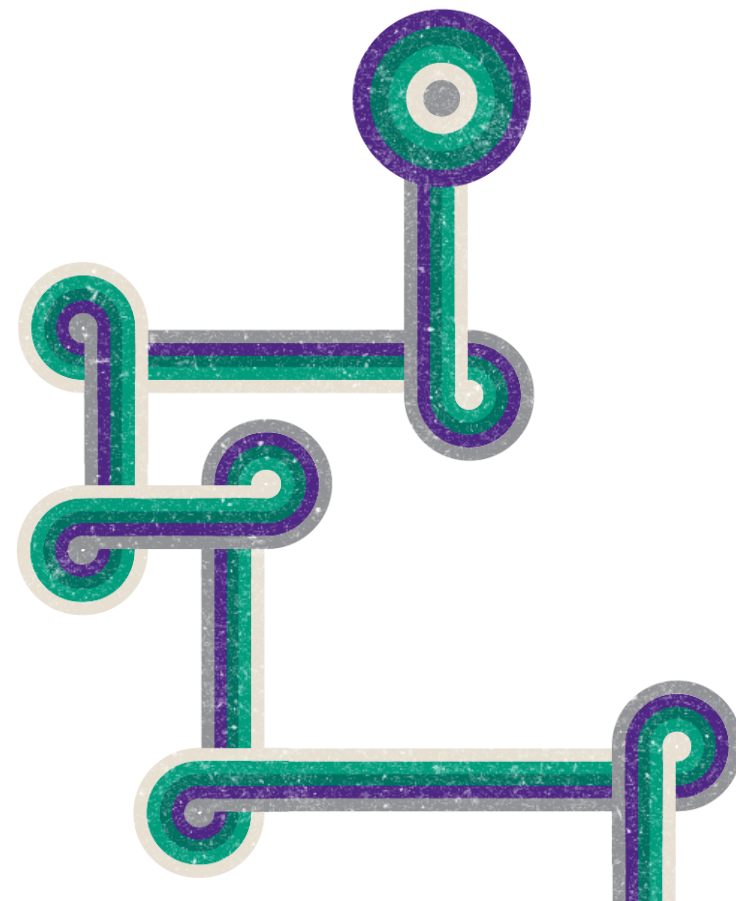




Moray East Offshore Wind Farm Transmission Assets

Ex-Post Cost Review

12 July 2023





Office of Gas and Electricity Markets
10 South Colonnade
Canary Wharf
London
E14 4PU

12 July 2023

Dear Sirs

Moray East Offshore Wind Farm Transmission Assets

In accordance with the Call Off Order Form Reference CON/SPEC/2020-15 dated 9 November 2020 between Smith Square Partners LLP and Ofgem, associated task order and Sub-contractor agreement dated 9 November 2020 between Grant Thornton UK LLP and Smith Square Partners LLP, we enclose for your attention our report detailing our findings arising from the Ex-Post Cost Review of the Moray East 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 F.

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 Moray East Offshore Wind Farm.

Yours faithfully

A handwritten signature in black ink that reads "Grant Thornton UK LLP".

Grant Thornton UK LLP

Chartered Accountants

Member firm within Grant Thornton International Ltd

Grant Thornton UK LLP is a limited liability partnership registered in England and Wales No: OC307742.

Registered office: 30 Finsbury Square, London, EC2A 1AG.

A list of members is available from our registered office.

Grant Thornton UK LLP is authorised and regulated by the Financial Conduct Authority.

Grant Thornton UK LLP
30 Finsbury Square
London
EC2P 2YU

T +44 (0)20 7184 4301
www.grantthornton.co.uk

Glossary

CAT	Cost assessment template	Moray East/the Wind Farm	Moray East Offshore Wind Farm
CR	Cost reporting	MOWEL	Moray Offshore Windfarm (East) Limited
CKD Galbraith	CKD Galbraith LLP	MW	Megawatt
Developer	MOWEL	NKT	NKT Cables GmbH & Co KG
Devex	Development expenditure	Ofgem	The Office of Gas and Electricity Markets
ENGIE	Engie S.A.	OFTO	Offshore transmission owner
EDPR	EDP Renovaveis S.A.	OSP	Offshore substation platform
EUR	Euro	PO	Purchase Order
FTV	Final Transfer Value	SCADA	Supervisory control and data acquisition system
GBP	Great British Pound	SHET	Scottish Hydro Electric Transmission PLC
Generation Assets	The generation assets of Moray East	SHETL	Scottish Hydro Electric Transmission Ltd
Grant Thornton	Grant Thornton UK LLP	SHL	SHL Offshore Contractors BV
GSMEC	Geosea Smulders Moray East Consortium	Siemens	Siemens Transmission & Distribution Limited
HV	High voltage	Transmission Assets	The transmission assets of Moray East
IDC	Interest during construction	Moray East/the Wind Farm	Moray East Offshore Wind Farm
ITV	Indicative transfer value	VO	Variation order
J-Power	The Electric Power Development Company Limited	WBS	Work breakdown structure
Kansai	Kansai Electric Power Co. Inc	WTG	Wind turbine generator
kV	Kilovolt		
MHI Vestas	MHI Vestas Offshore Wind A/S		

Contents

1. Section	Page	Appendices	Page
1. Executive summary	5	A. Restrictions on circulation, disclosures of interest, forms of report and	
2. Introduction and background	11	information relied on	21
3. The Moray East Ex-Post Cost Review	15	B. GSMEC invoice review	22
		C. NKT invoice review	26
		D. Siemens invoice review	34
		E. Indirect costs review	37
		F. Movements between the cost templates	38

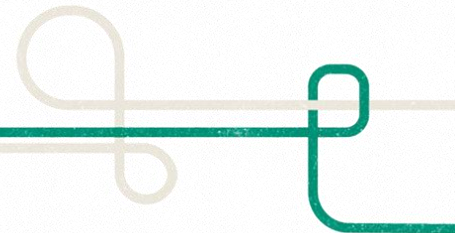


Section 1: Executive summary

01. Executive summary

02. Introduction and background

03. The Moray East Ex-Post Cost Review



Executive summary

Introduction

- This report relates to the Moray East Offshore Wind Farm which is owned by Delphis Holdings Limited, Moray Offshore Renewable Power Limited, Diamond Green Limited and China Three Gorges (UK) Limited
- Moray East is a 950MW offshore wind farm, occupying approximately 296km², located off the Caithness Coast in the far north of Scotland
- The Transmission Assets consist three offshore substations, three 220kV AC offshore export cables (between approximately 56km and 63km in length), and three onshore export cables (approximately 34.5km in length). These connect to the MOWEL onshore substation in New Deer, Aberdeenshire, where the project connects to the network of SHET. The Transmission Assets also include the OFTO SCADA system
- The construction of the Transmission Assets is complete and the Wind Farm is fully operational, with full export capacity being achieved on 16 July 2021

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 invoiced costs to the 22 January 2022 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 22 January 2022 CAT to the ITV at 20 October 2021 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 22 January 2022 and incorporates information and explanations provided regarding the costs in this version of the cost template, both from various calls with the Developer to discuss the Transmission Assets and processes and in correspondence with the Developer, up to 15 May 2023
- 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 the CAT dated 19 March 2021 (the Ex-Ante Cost Review) and our draft report was considered by Ofgem in establishing the project's ITV

Executive summary (continued)

Transmission Assets cost summary

- The 22 January 2022 CAT is summarised below:

Breakdown of Transmission Assets costs

	CAT Reference	20 October 2021 ITV £	22 January 2022 CAT £	Movement £
Project common costs	CR8			
Offshore substation	CR2			
Submarine cable supply and installation	CR3			
Land cable supply and installation	CR4			
Onshore substation	CR5			
Reactive substation	CR6			
Connection costs	CR7			
Transaction costs	CR9			
Total capital costs				
Interest during construction				
Total		647,835,572	695,507,589	47,672,018

- The 22 January 2022 CAT reflects a net increase in the cost of the Transmission Assets of £[REDACTED] from the 20 October 2021 ITV. There was an increase in capital costs of £[REDACTED] whilst IDC increased by £[REDACTED]. This net increase in capital costs is after the release of £[REDACTED] of contingency provisions no longer required at FTV.
- The principal movements which result in the net increase in capital costs (prior to the release of contingency) of £[REDACTED] are:
 - £[REDACTED] of CR4 and CR5 costs disallowed by Ofgem at ITV have been added back into the FTV

- £[REDACTED] increase for 400kV upgrade works (CR5)
- £[REDACTED] increase in CR8 costs including legal and consultancy costs which are partially offset by the removal of £[REDACTED] cost no longer required
- The full analysis of the variances summarised in the table opposite is presented at Appendix F

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 Ex-Ante Cost Review and Ex-Post Cost 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

Directly incurred costs

- Ofgem has instructed us to carry out certain procedures on the costs payable by the Wind Farm to:
 - GSMEC
 - NKT
 - Siemens

Executive summary (continued)

Summary of findings (continued)

Directly incurred costs (continued)

- These procedures have been carried out as required and a summary of findings is set out below:

Summary of direct costs testing

	Invoices paid £	Accrued amounts £	Other £	Non-OFTO amounts £	Immaterial difference £	Total per 22 January 2022 CAT £
GSMEC						
NKT						
Siemens						
Total						

- In total, we have verified direct costs payable by the Wind Farm in relation to three contracts, totalling £ [REDACTED] ([REDACTED]% of the total capital costs) in relation to the Transmission Assets
- We have verified that all invoices, totalling £ [REDACTED], have been paid. However, we note that this amount is prior to the deduction of £ [REDACTED] of non-OFTO amounts
- In addition to the paid amounts, accrued amounts of £ [REDACTED] represent amounts still to be invoiced or invoices to be processed and other amounts of £ [REDACTED] relate to adjustments to the CAT dated 22 January 2022 as detailed in Section 3

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 schedule of project management costs (updated for actuals to August 2021), an Excel spreadsheet which lists all project roles, durations, and average annual salaries (including bonus, pension, insurance and benefits) to calculate a total cost across the relevant personnel categories
- Each role in the schedule of project management costs is assigned an estimated OFTO percentage allocation based upon their role, being either [REDACTED]% (the general allocation rate where no other cost drivers are available), [REDACTED]% (for project management costs considered to be shared equally) or [REDACTED]%
- We have verified a sample of resources costs (for March 2021) to the relevant underlying records, including payroll reports, timesheets, intercompany recharges and invoices
- Our testing in relation to indirect costs (on a random sample of five employees) is summarised below:

Summary of indirect costs testing

Function	Staff Contractor	OFTO allocation	Agreed to payroll /invoice	Agreed to intercompany recharge/ bank

Executive summary (continued)

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 as evidence that they have been incurred or are due; and
 - that the relevant cost is included within the 22 January 2022 CAT
- This is subject to proposed adjustments to decrease the cost of the Transmission Assets by a total of £[REDACTED] as detailed on the following page
- the schedule of project management costs calculates the cost to be included in the CAT using average annual salaries (including bonus, pension, insurance and benefits) for each role. We have not sought to verify how these salaries have been calculated nor is it within our to expertise to establish whether the salaries used (along with the time spent by the staff) are reasonable. As such we recommend that Ofgem should consider instructing technical advisors to review the resources time and rates included in the schedule of project management costs in order to determine whether these costs are being efficiently incurred
- These are further detailed in Section 3 and Appendices E and F

Recommendations for follow up

- However, we recommend that Ofgem should follow up the below with the Developer:
 - a contingency provision of £[REDACTED] remains in the 22 January 2022 CAT in relation to 400kV upgrade works (CR5). We recommend that Ofgem should obtain an update from the Developer once the contract has been signed and consider whether the £[REDACTED] of additional costs included in the 22 January 2022 CAT can be updated and the contingency released
 - costs totalling £[REDACTED] that were disallowed by Ofgem at ITV have been resubmitted by the Developer in the 22 January 2022 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

Executive summary (continued)

Impact of cost assessment

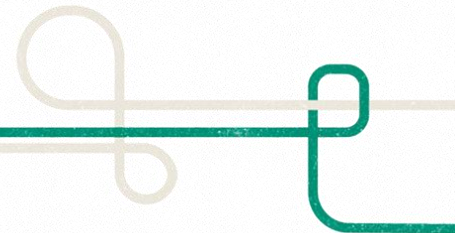
CAT reference		£
Cost of Transmission Assets per CAT dated 22 January 2022 (excluding IDC)		
Total adjustments		
Revised cost of Transmission Assets		617,747,447

Section 2: Introduction and background

01. Executive summary

02. Introduction and background

03. The Moray East Ex-Post Cost Review



Introduction

Introduction

Instructions

- Grant Thornton has been instructed by Ofgem to prepare a report on our review of the cost information and 22 January 2022 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 on page 14, and in particular to a sample of costs which have been selected by Ofgem
- This report reflects the 22 January 2022 CAT together with information and explanations received by Grant Thornton up to and including up to 15 May 2023. 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 2021, we conducted a review of the CAT dated 19 March 2021 for the Transmission Assets (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 £[REDACTED] (which equated to [REDACTED]% 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 on 20 October 2021. This was based upon the Transmission Assets costs included in our draft report, and adjusted for particular issues that had been highlighted in our report

Breakdown of Transmission Assets costs

	CAT Reference	Grant Thornton ex-ante report £	Adjustments per Grant Thornton ex-ante report Adjustments £	Unsubstantiated costs £	GT Adjustments not applied at ITV £	Ofgem ex-ante adjustments £	20 October 2021 ITV £
Project common costs	CR8	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Offshore substation	CR2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Submarine cable supply and installation	CR3	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Land cable supply and installation	CR4	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Onshore substation	CR5	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Reactive substation	CR6	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Connection costs	CR7	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Transaction costs	CR9	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total capital costs		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Interest during construction		[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total		776,501,666	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	647,835,572

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 22 January 2022 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 invoiced costs to the 22 January 2022 CAT
 - in relation to indirectly incurred costs, for a sample of transactions, trace from the 22 January 2022 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 22 January 2022 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 issue 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

- Moray East is owned by Delphis Holdings Limited (23.3%), Moray Offshore Renewable Power Limited (33.3%), Diamond Green Limited (33.4%) and China Three Gorges (UK) Limited (10%)
- Moray Offshore Renewable Power Limited is 100% owned by EDPR UK Limited which in turn is owned by EDPR who manages its offshore projects through Oceans Winds, a 50:50 joint venture with ENGIE
- Diamond Green Limited is a joint venture between subsidiaries of Mitsubishi Corporation (50%), The Kansai Electric Power Co., Inc. (30%), and Mitsubishi UFJ Lease and Finance (20%). Its sole activity is the management of its investment in Moray East
- As the Developer, MOWEL has responsibility for managing construction of the Wind Farm and will also continue to manage the operations on behalf of the shareholders when the Wind Farm is operational
- The Moray East site is approximately 296km², located approximately 22km from the Caithness Coast in the far north of Scotland. The offshore and onshore electrical infrastructure connect the Wind Farm to the electricity network. Sub-sea export cables from the offshore wind farm make landfall at Inverboyndie Bay with the power entering the electricity network at the new SHET substation at New Deer, Aberdeenshire
- The 950MW wind farm comprises 100 MHI Vestas V164-9.5 MW WTGs, which are supported by three-legged jacket foundations with pre-installed piles located in water depths of between 39 metres and 53 metres. The WTGs are connected to the three 66kV/ 200kV OSPs by 66kV array cables in strings of maximum 7 WTGs. These OSPs are connected to each other via 66kV interlinks (to be retained by the Developer), and are linked to shore by three 220kV AC offshore export cables which connect to three onshore export cables at Inverboyndie Beach

Background (continued)

Background (continued)

- The Transmission Assets primarily comprise three offshore substations, three 220kV AC offshore export cables (between approximately 56km and 63km in length), and three onshore export cables (approximately 34.5km in length). These then connect to the MOWEL onshore substation in New Deer, Aberdeenshire, where the project connects to the network of SHET. The Transmission Assets also include the OFTO SCADA system
- The Commercial Operation Date, when all WTGs were commissioned and operational, was achieved in April 2022. The construction of the Transmission Assets is complete with commissioning being achieved in July 2022. The Wind Farm is fully operational and full export capacity was achieved on 16 July 2022

Section 3: The Moray East Ex-Post Cost Review

01. Executive summary

02. Introduction and background

03. The Moray East 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 22 January 2022 CAT for the Transmission Assets of the Wind Farm is summarised below:

Breakdown of Transmission Assets costs

	CAT Reference	20 October 2021 ITV £	22 January 2022 CAT £	Movement £
Project common costs	CR8			
Offshore substation	CR2			
Submarine cable supply and installation	CR3			
Land cable supply and installation	CR4			
Onshore substation	CR5			
Reactive substation	CR6			
Connection costs	CR7			
Transaction costs	CR9			
Total capital costs				
Interest during construction				
Total		647,835,572	695,507,589	47,672,018

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, with a WBS coding system to assign costs of the Wind Farm and allocate responsibilities to packages

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
 - office costs
 - project support functions eg procurement, cost control, health and safety
 - general consultants eg legal, environment and consent
- Shared costs are allocated using various allocation rates depending on the cost driver
- The Developer has confirmed that the allocation rates remain the same as at ITV (and detailed in our ex-ante report)

Process for making payments

- The main process used by the Developer for invoice and purchase order approval and making payments for both directly and indirectly incurred costs is set out in our ex-ante report

Review of directly incurred costs

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	22 January 2022 CAT £	% of total Transmission Asset capital costs
GSMEC	CR2		
NKT	CR3		
Siemens	CR2/5/6		
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
- Our findings are summarised in the table opposite along with further details of our testing in relation to these contracts

Invoices paid

- For each of the three contracts selected by Ofgem, we obtained a schedule of 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 six contracts is set out in Appendices B to G

Summary of direct costs testing

	Invoices paid £	Accrued amounts £	Other £	Non-OFTO amounts £	Immaterial difference £	Total per 22 January 2022 CAT £
GSMEC						
NKT						
Siemens						
Total						

- Our review of invoices paid by the Developer (totalling £), relating to the three contracts selected by Ofgem, confirmed payment to the contractor

Accrued amounts

- Accrued amounts totalling £ represent invoices still to be processed/remaining costs payable in relation to the GSMEC and Siemens contracts

Non-OFTO amounts

- Amounts not related to the Transmission Assets represent amounts paid to contractors which related to the Generation Assets. We note that this figure is high in relation to the GSMEC contract as several of the invoices tested had been raised against more than one PO some of which were OFTO related and some of which related to the Generation Assets

Other amounts

- Other amounts in relation to the GSMEC contract relate to a £ adjustment by Ofgem at ITV in relation to the GSMEC consolidated claims package and £ of foreign exchange difference

Review of directly incurred costs (continued), review of indirectly incurred costs and movements in the cost assessment

Review of directly incurred costs (continued)

Other amounts (continued)

- Other amounts in relation to the Siemens contract relate to adjustments required to the 22 January 2022 CAT for the removal of amounts not delivered (totalling £[REDACTED]) and the addition of £[REDACTED] of costs disallowed by Ofgem at ITV that have since been delivered

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 six employees
 - agree costs from each timesheets/ payroll records 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 E, and our findings are summarised in the below table:

Summary of indirect costs testing

Function	Staff/ Contractor	OFTO allocation	Agreed to payroll /invoice	Agreed to intercompany recharge/ bank
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

- Our testing of project management support services costs demonstrated that costs have been paid as stated. However, there are variances between the monthly costs paid and the costs included in the schedule of project management costs, as further detailed in Appendix E
- For the avoidance of doubt, we have not verified time spent or salaries charged to the project by the Developer

Movements in the cost assessment

- The movements between the ITV set October 2021 and the most recent cost assessment in the 22 January 2022 CAT are summarised in the following table:

Breakdown of Transmission Assets costs

	CAT Reference	20 October 2021 ITV £	22 January 2022 CAT £	Movement £
Project common costs	CR8	[REDACTED]	[REDACTED]	[REDACTED]
Offshore substation	CR2	[REDACTED]	[REDACTED]	[REDACTED]
Submarine cable supply and installation	CR3	[REDACTED]	[REDACTED]	[REDACTED]
Land cable supply and installation	CR4	[REDACTED]	[REDACTED]	[REDACTED]
Onshore substation	CR5	[REDACTED]	[REDACTED]	[REDACTED]
Reactive substation	CR6	[REDACTED]	[REDACTED]	[REDACTED]
Connection costs	CR7	[REDACTED]	[REDACTED]	[REDACTED]
Transaction costs	CR9	[REDACTED]	[REDACTED]	[REDACTED]
Total capital costs		[REDACTED]	[REDACTED]	[REDACTED]
Interest during construction		[REDACTED]	[REDACTED]	[REDACTED]
Total		647,835,572	695,507,589	47,672,018

- The 22 January 2022 CAT reflects a net increase in the cost of the Transmission Assets of £[REDACTED] from the 20 October 2021 ITV, as a result of a £[REDACTED] increase in capital costs and a £[REDACTED] increase in IDC

Movements in the cost assessment and Impact of Cost Assessment Review

Movements in the cost assessment (continued)

- The net increase in capital costs of £[REDACTED] is after the release of contingency provisions, totalling £[REDACTED], which are no longer required at FTV. Excluding the contingency release, capital costs have increased by £[REDACTED]. The principal reasons for this net increase are:
 - £[REDACTED] of CR4 and CR5 costs disallowed by Ofgem at ITV have been resubmitted in the 22 January 2022 CAT
 - £[REDACTED] for 400kV upgrade works (CR5)
 - [REDACTED] in CR8 costs including legal and consultancy costs which are partially offset by the removal of £[REDACTED] costs no longer required
- The full analysis of the variances is presented at Appendix F

Impact of Cost Assessment Review

- Following our review of the 22 January 2022 CAT, as detailed above, and subject to the recommendations for follow up below, we propose the following adjustments to the 22 January 2022 CAT:
 - to decrease [REDACTED] for amounts not delivered in relation to the Siemens contract
 - to increase [REDACTED] for costs in relation to the Siemens contract removed by Ofgem/Grant Thornton at ITV that have subsequently been delivered
 - to decrease [REDACTED] for WTG Islanding costs disallowed by Ofgem
 - to decrease [REDACTED] to remove NKT estimated costs no longer required
 - to decrease [REDACTED] to remove NKT costs included in the 22 January 2022 CAT twice in error
 - to decrease [REDACTED] to reflect an adjustment for generation use not reflected in the 22 January 2022 CAT in error

- These adjustments would result in a net [REDACTED] and a revised cost of the Transmission Assets (excluding IDC) of £617,747,447

Recommendations for follow up

- A contingency provision of £[REDACTED] remains in the 22 January 2022 CAT in relation to 400kV upgrade works (CR5) as the contract was not signed when the FTV CAT was submitted. We recommend that Ofgem should obtain an update from the Developer once the contract has been signed and consider whether the £[REDACTED] of additional costs included in the 22 January 2022 CAT can be updated and the contingency released
- As highlighted above and further detailed in Appendix F, costs totalling £[REDACTED] disallowed at ITV have been resubmitted in the 22 January 2022 CAT. This includes £[REDACTED] relating to the delta between Ofgem's benchmarking and the CR4 costs submitted by the Developer, £[REDACTED] relating to the delta between Ofgem's benchmarking and the CR5 costs submitted by the Developer and £[REDACTED] of CR4 costs relating to fibre optics used by the generator (we note that the adjustment to remove these costs is not included in the 22 January 2022 CAT totals and therefore we have proposed an adjustment to include the removal). 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
- The schedule of project management costs calculates the costs to be included in the CAT using average annual salaries (including bonus, pension, insurance and benefits for each role). We recommend that Ofgem should consider instructing technical advisers to determine whether these salaries, the time spent and therefore the costs included in the CAT are reasonable

Appendices

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

B. GSMEC invoice review

C. NKT invoice review

D. Siemens invoice review

E. Indirect costs review

F. Movements between the cost templates

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:
 - Moray East Information Memorandum 2020
 - information contained in the Ofgem developer data room for the Moray East project, including:
 - the 22 January 2022 CAT, which includes actual costs incurred up to December 2021 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 the Developer to discuss the Transmission Assets and processes, and subsequent email correspondence, up to 15 May 2023, with staff responsible for the preparation of the 22 January 2022 CAT

[illegible]

[illegible]

[illegible]

C. NKT invoice review

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

C. NKT invoice review (continued)

[illegible]

[illegible]

[illegible]

[illegible]

E. Indirect costs review

Project management costs

- The Developer has outlined the process for allocating project management costs to the Transmission Assets. The process is as follows:
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
- As instructed by Ofgem, we selected a sample of six individuals to test the above process for the month of March 2021

- The Developer has provided supporting documentation for each of the individuals as follows:
 - payroll reports showing gross salary for the two staff on the MOWEL payroll
 - recharge extract and recharge invoice for March 2021 for the two staff on the Ocean Winds UK Limited
 - invoices and timesheets for the two contractors, along with an extract from the bank statements showing payments to the respective limited companies
- As set out in the table below, there are variances between the cost calculated in the schedule of project management costs and the actual costs paid/recharged for the month. The Developer explained that this would be expected as the average salaries included in the schedule of project management costs include additional costs such as bonuses, insurances etc
- As such we have not been able to verify the costs included in the CAT to the posting on the system. We recommend that Ofgem consider the reasonableness of the annual salaries included in the schedule of project management costs further

Indirect costs testing

Job function	Staff/ Contractor	OFTO allocation	March 2021 cost £	Quantity	Invoiced /payroll cost £	Variance £	Agreed to payroll /invoice	Date paid	Agreed to intercompany recharge/ [REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

F. Movements between the cost templates

- We have been instructed to compare the total Transmission Asset costs as set out in the 22 January 2022 CAT with the total Transmission Asset costs included within the ITV at 20 October 2021, 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	20 October 2021 ITV £	22 January 2022 CAT £	Movement £
Project common costs	CR8			
Offshore substation	CR2			
Submarine cable supply and installation	CR3			
Land cable supply and installation	CR4			
Onshore substation	CR5			
Reactive substation	CR6			
Connection costs	CR7			
Transaction costs	CR9			
Total capital costs				
Interest during construction				
Total		647,835,572	695,507,589	47,672,018

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

Offshore substation

- Offshore substation costs have decreased by a net amount of £[REDACTED], primarily as a result of:
 - the removal of £[REDACTED] of estimated costs for anticipated future claims which are partially offset by the inclusion of the GSMEC settlement costs of £[REDACTED], which we have agreed to invoice
 - £[REDACTED] of additional Siemens costs in relation to WTG Islanding (We understand that this cost has been disallowed by Ofgem and therefore we have proposed an adjustment to remove this amount from the 22 January 2022 CAT)
 - the release of the £[REDACTED] contingency provision no longer required at FTV

Submarine cable supply and installation

- Submarine cable supply and installation costs have increased by a net amount of £[REDACTED] primarily as a result of:
 - a net increase in NKT contract costs of £[REDACTED] (after the removal of £[REDACTED] of estimated costs to complete included at ITV). As set out in Section 3 above, we have agreed the NKT costs included in the 22 January 2022 CAT to invoices, [REDACTED] which has been included twice in error and therefore an adjustment has been proposed to remove the duplicated costs
 - £[REDACTED] of Devex cost reallocated from CR4
 - the release of the £[REDACTED] contingency provision no longer required at FTV

F. Movements between the cost templates (continued)

Land cable supply and installation

- Land cable supply and installation costs have increased by a net amount of £[REDACTED] primarily as a result of:
 - £[REDACTED] of costs disallowed at ITV which have been resubmitted by the Developer in the 22 January 2022 CAT
 - the Developer considers that as a result of the revised benchmarking by Ofgem during the FTV phase the costs of £[REDACTED] are now within the benchmark and therefore should no longer be disallowed at FTV
 - we note that £[REDACTED] has been resubmitted in error and therefore an adjustment has been proposed to remove
 - £[REDACTED] of Siemens contract costs have been reallocated to CR5
 - £[REDACTED] of estimated costs in relation to land rights for onshore export cable are no longer required and therefore have been removed
 - the release of the £[REDACTED] contingency provision no longer required at FTV

Onshore substation

- Onshore substation costs have increased by a net amount of £[REDACTED] primarily as a result of:
 - £[REDACTED] of additional costs have been included since ITV for the 400kV upgrade works. We recommend that Ofgem obtain an update in relation to this contract (which was not signed at 22 January 2022) and the costs incurred
 - £[REDACTED] of costs disallowed at ITV which have been resubmitted by the Developer in the 22 January 2022 CAT. We understand that the Developer is to provide further explanation to justify that the cost is economic and efficient and should not be disallowed
 - £[REDACTED] of Siemens contract costs have been reallocated from CR4
 - £[REDACTED] of Siemens contract costs have been reallocated to CR7

- a decrease of £[REDACTED] due to the Siemens contract settlement
- an increase of £[REDACTED] in relation to strategic spares
- the removal of estimated costs of £[REDACTED] in relation to spare cable no longer required
- the release of the £[REDACTED] contingency provision no longer required at FTV (leaving a provision of £[REDACTED] in the 22 January 2022 CAT)

Reactive substation

- Reactive substation costs have increased by £[REDACTED] in relation to 400kV upgrade works

Connection costs

- Connection costs have increased by a net amount of £[REDACTED] as a result of:
 - £[REDACTED] of Siemens contract costs that have been reallocated from CR5
 - the release of £[REDACTED] of estimated costs to complete included at ITV for anticipated delays that could be incurred due to delays by SHETL. However, the Developer mitigated this risk and no costs as a result of delays have been incurred

Project common costs

- Project common costs have decreased by a net amount of £[REDACTED], primarily as a result of:
 - £[REDACTED] of additional costs have been included since ITV, being £[REDACTED] We have agreed these costs to POs
 - £[REDACTED] of additional financial advisor (Santander) costs for developing the financial model including the model for the OFTO assets. The Developer has explained that the model is shared equally between Generator and OFTO and therefore has been allocated 50:50.

F. Movements between the cost templates (continued)

Project common costs (continued)

- additional legal and financial due diligence costs, ■% of which have been allocated to OFTO, being £■■■■■■■■■■) and £■■■■■■■■■■)
- various costs totalling £■■■■■■■■■■ have been included in the 22 January 2022 CAT that were not included at ITV. There are 78 such lines in the 22 January 2022 CAT however as each cost is individually less than £■■■■■■■■■■ we have not looked into these costs further
- the removal of £■■■■■■■■■■ of costs no longer required
- the release of the £■■■■■■■■■■ provision no longer required at FTV

IDC

- IDC has increased by £■■■■■■■■■■. As this is outside the scope of this review no further work has been performed in this area

