



**Grant Thornton**

**Ex-Ante Cost Review of Westermost Rough Wind Farm  
Transmission Assets**

**Report of Grant Thornton UK LLP dated  
29 January 2016**

## **CONTENTS**

<b>1</b>	<b>Executive summary</b>	<b>1</b>
<b>2</b>	<b>Introduction</b>	<b>8</b>
<b>3</b>	<b>Background</b>	<b>11</b>
<b>4</b>	<b>The WMR Ex-Ante Review</b>	<b>13</b>
<b>5</b>	<b>WMR processes</b>	<b>16</b>
<b>6</b>	<b>Costs common to the Transmission Assets as a whole</b>	<b>25</b>
<b>7</b>	<b>Project common costs and development costs</b>	<b>36</b>
<b>8</b>	<b>Offshore substation</b>	<b>46</b>
<b>9</b>	<b>Submarine cable supply and installation</b>	<b>52</b>
<b>10</b>	<b>Land cable supply and installation</b>	<b>58</b>
<b>11</b>	<b>Onshore substation connection</b>	<b>61</b>
<b>12</b>	<b>Issues arising</b>	<b>67</b>

## **APPENDICES**

- 1 Summary of agreed costs [NOT IN REDACTED VERSION]**
- 2 Common costs estimates to complete [NOT IN REDACTED VERSION]**

# 1 EXECUTIVE SUMMARY

- 1.1 Our review and this report is based upon the cost template submitted to Ofgem dated 7 April 2014 and incorporates information and explanations provided regarding the costs in this version of the cost template, both during our site visits and in correspondence with the Developers up to 7 October 2014. It was originally written at that date.
- 1.2 The Westermost Rough Wind Farm (WMR/the Wind Farm) is situated in the North Sea, approximately eight kilometres off the coast of Yorkshire, and is located entirely within UK territorial waters. It will consist of 35 Siemens 6MW wind turbine generators (WTGs) with an installed capacity of 210MW, and the WMR transmission assets (the Transmission Assets) will connect to the National Grid Electricity Transmission plc (NGET) substation in Hedon, near Hull.
- 1.3 The Transmission Assets are currently nearing the end of their construction and were due to be fully operational by the end of September 2014.
- 1.4 The Wind Farm is owned by Westermost Rough Limited (WMR Ltd), a special purpose vehicle (SPV) ultimately jointly-owned by DONG Energy A/S (50%) (DONG), Marubeni Corporation (25%) (Marubeni) and UK Green Investment Bank plc (25%) (GIB) (collectively the Developers). The Developers will construct the WMR project managed by DONG under a Construction Management Agreement.
- 1.5 Grant Thornton UK LLP (Grant Thornton) has been instructed by The Office of Gas and Electricity Markets (Ofgem) to review the ex-ante cost assessments prepared by the Developers for the Transmission Assets of the Wind Farm (the Ex-Ante Review).
- 1.6 The Ex-Ante Review has considered the accuracy, completion and allocation of costs against the cost template prepared by the Developers for the Wind Farm Transmission Assets, based on supporting information and methodology provided by the Developers. Further detail on our work is set out in **Sections 4 to 12** of this report. The purpose of a review at this stage is to:
- 1.6.1 determine if a developer cost estimate requires updating for the next stage of the transfer process, Enhanced Pre-Qualification (EPQ) and Invitation to Tender (ITT);

- 1.6.2 aid identification of technical issues that we have noted by helping to identify areas where the cost information suggests that further technical review may be required to consider efficiency as part of determining the Indicative Transfer Value (ITV) for the ITT stage of the process; and
- 1.6.3 assist determination of the ITV for ITT by reviewing accuracy, allocation and completeness of cost information.
- 1.7 The cost allocation template (version 4) dated 7 April 2014 (the CAT) estimates the costs of the WMR Transmission Assets at £192.4 million, which is equivalent to the initial transfer value set by Ofgem in April 2014. This represents a decrease on the initial cost assessment by the Developers at 31 July 2013 as set out in version 1 of the cost template which projected the original cost to be £[REDACTED] million. The CAT has assessed the costs of the Transmission Assets as follows:

#### Transmission Assets cost summary

	Direct costs	Contingency	Total costs	
	£	£	£	%
Project common costs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Offshore substation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Submarine cable supply and installation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Land cable supply and installation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Onshore substation connection	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
General development costs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total capital costs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Interest during construction	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	192,407,296	100%

#### SUMMARY OF FINDINGS

- 1.8 The Developers have provided us with supporting documentation and/or explanations for the majority of items included within the cost template, which we have reviewed. We have found that all major items of expenditure for Transmission Assets have been procured under contracts specific to the transmission business.

- 1.9 We have agreed 93% (£ [REDACTED]) of the costs of the transmission business to the major contracts, variation orders or working schedules with underlying supporting documentation, entered into by the Wind Farm and the subcontractors for the various packages (see **Appendix 1**). However, the areas where we would recommend that Ofgem should discuss an issue with the Developers are indicated within this report.

### **Adjustments to the CAT**

- 1.10 As noted in paragraph 1.9 above, we have been able to verify 93% (£ [REDACTED]) of the costs included within the CAT. The remaining 7% (£ [REDACTED]), which we understand the Developers are adjusting the CAT for, relates to areas where the Developers have highlighted that the CAT needs to be adjusted (£ [REDACTED]), costs for which insufficient information or explanations have been provided by the Developers, preventing us from being able to determine whether the costs included within the CAT have been calculated on a reasonable basis (£ [REDACTED]) and other adjustments we have identified during our review which net off to £ [REDACTED].
- 1.11 We note in individual paragraphs within this report where adjustments have been made. Details of the individual amounts are also set out in **Appendix 1**.

### **Overhead allocation rates**

- 1.12 The CAT includes a number of costs common to the Wind Farm as a whole which have been allocated to the Transmission Assets at a rate of 25%. This rate has been determined based upon the relative costs directly attributable to the Transmission Assets as a percentage of relative costs directly attributable to each of the Transmission Assets and the generation assets. We consider that to be an acceptable method of cost allocation, and consistent with approaches adopted on other wind farm projects.
- 1.13 However, based upon current information, along with the adjustments we understand the Developers have agreed to process, the percentage of costs directly attributable to the Transmission Assets has fallen from 25% (to approximately 23%). We understand that the Developers will establish a new allocation rate once all other areas of the cost assessment for the ITV phase have been agreed. We therefore do not propose any adjustment but note that a reduction to project common costs may be required once the new rate has been established.

### Calculation of hourly rates

- 1.14 The hourly rates which are used by the Developers to charge the time which people spend on the Wind Farm include a profit element, which the Developers state is included in all cross entity activities to ensure compliance with transfer pricing requirements, as detailed at paragraphs 6.5 to 6.7.
- 1.15 We understand that the Developers are required to sell the Transmission Assets to the offshore transmission owner (OFTO) at cost. As such, the inclusion of profit within the hourly rates is inconsistent with this.
- 1.16 We therefore consider that the hourly rates included in the CAT should be reduced to remove the profit element. However, we are unable to determine the extent of any adjustment, as the breakdown of hourly rates into constituent parts has not been provided.

### Contingencies

- 1.17 The CAT for the Transmission Assets includes a contingency provision amounting to £ [REDACTED] ([REDACTED] % of pre contingency costs). The Developers calculate contingencies based on the WMR Risk Register. Due to the stage of construction of the development, the aggregated amount of contingency for the Engineering, Procurement and Construction (EPC) packages is low relative to other wind farms we have seen, and reflects the requirement based on the P80-risk approach adapted by the Developers<sup>1</sup>.
- 1.18 By the time of the ex-post cost assessment (the Ex-Post Review), the value of contingencies is expected to fall to zero, as at this stage all costs will be known.

### Foreign exchange

- 1.19 The CAT includes costs which are payable in foreign currencies (either Euros or Danish Krone (DKK)) which, based upon a split by percentage of costs denominated in foreign currencies provided by the Developers, we consider total in the region of £ [REDACTED] million. The Developers have accounted for these costs within the CAT by applying set exchange rates.

---

<sup>1</sup> Representing the maximum costs overrun with 80% certainty

- 1.20 Whilst we have not been provided with the Developers' calculations of exchange rates, we have benchmarked the rates used to actual exchange rates in the period January 2013 to June 2014, which is the period in which most expenditure has been incurred. These rates are very similar to the rates used by the Developers in the CAT, and as such we consider that the rates used by the Developers are reasonable.

### **Areas requiring technical input**

- 1.21 The CAT for the Transmission Assets includes the costs of time spent by the Developers' internal staff in managing the project and in the construction of the Transmission Assets.
- 1.22 The Developers have provided us with detailed schedules which show the number of hours spent and forecasted hours by each individual and activity during the construction of the Wind Farm. However, it is not our area of expertise to establish whether the time spent by the Developers' own staff is reasonable, or whether the average hourly rate used in the CAT is reasonable.
- 1.23 On this basis, we recommend that Ofgem should instruct their technical advisors to review these schedules in order to determine whether these costs are being efficiently incurred.
- 1.24 Separately, as set out above, the contingency provision for the Transmission Assets has been calculated based upon the Developers' assessment of the risks associated with the construction of the Transmission Assets. It is not our area of expertise to establish whether the Developers' assessment of the expected value of risks and of the likelihood of each event occurring are correct.
- 1.25 On this basis, should Ofgem require more comfort in this area, we recommend that it should instruct its technical advisors to review the risk schedule in order to determine whether the Developers' assessments are reasonable.
- 1.26 [REDACTED]





Total adjustments to be processed by the Developers	(13,711,437)
<b>Revised cost of Transmission Assets</b>	<b>178,695,860</b>

- 1.28 A reduction in the capital value of Transmission Assets may be required in relation to;
- i a reduction in the percentage costs directly attributable to the Transmission Assets ie the allocation rate of project common costs, as detailed in paragraph 1.13
  - ii the inclusion of profit in hourly rates, as detailed at paragraph 1.16. However, at this stage, we do not have sufficient information to quantify the extent of this adjustment.

**Grant Thornton UK LLP**

**London**

29 January 2016

## 2 INTRODUCTION

### INSTRUCTIONS

- 2.1 Grant Thornton UK LLP has been instructed by Ofgem to prepare a report on the Ex-Ante Review of the cost information and cost templates prepared for Ofgem by the Developers, for the Transmission Assets of WMR.
- 2.2 The review is to understand whether the costs provided in the Developers' cost template can be matched to specific contracts or other supporting information, and whether appropriate metrics exist for cost allocation between transmission and generation. Our work involved tracing the amounts quoted in the cost assessment template to supporting contracts, schedules and other supporting information that indicates how costs have been derived. The review also involved a site visit to the Developers' premises in order to discuss the information provided, together with the basis for the cost allocation metrics used.
- 2.3 The purpose of a review at this stage is to:
  - 2.3.1 determine if a developer cost estimate requires updating for the next stage of the transfer process, EPQ and ITT;
  - 2.3.2 aid technical evaluation by helping to identify areas where the cost information suggests that further technical review may be required to consider efficiency as part of determining the ITV for the ITT stage of the process; and
  - 2.3.3 assist determination of ITV for ITT by reviewing accuracy, allocation and completeness of cost information.
- 2.4 The Ex-Ante Review is based upon the Developers' current estimates of the costs to be incurred by the Transmission business. Following construction of the Wind Farm, we expect to carry out a detailed forensic review of the actual expenditure incurred by the transmission business (the Ex-Post Review).
- 2.5 Grant Thornton's review of the ex-ante cost information prepared by the Developers is limited to the scope as set out above and does not include detailed cost verification or any review of technical or legal issues.

- 2.6 Our review and this report is based upon the cost template submitted to Ofgem dated 7 April 2014 and incorporates information and explanations provided regarding the costs in this version of the cost template, both during our site visits and in correspondence with the Developers up to 7 October 2014. It was originally written at that date.
- 2.7 If further information is produced and brought to our attention after service of this report, we reserve the right to revise our opinions as appropriate.
- 2.8 This work does not constitute an audit performed in accordance with Auditing Standards, but follows instructions agreed upon with Ofgem, as detailed in the task order.
- 2.9 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 by the Court as accurate, it may be necessary to review our conclusions.
- 2.10 The report has been prepared using Microsoft Word and Excel. The report may contain minor rounding adjustments due to the use of computers for preparing certain calculations.
- 2.11 No responsibility is accepted to anyone other than Ofgem.

### **RESTRICTION ON CIRCULATION**

- 2.12 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.
- 2.13 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 material referring to any third party material or the accuracy of such material.

**DISCLOSURES OF INTEREST**

- 2.14 To the best of our knowledge, we have no connection 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**

- 2.15 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.

## 3 BACKGROUND

### INTRODUCTION

- 3.1 WMR is situated in the North Sea, approximately eight kilometres off the coast of Yorkshire, and is located entirely within UK territorial waters. NGET is the onshore transmission licensee, and the WMR Transmission Assets will connect to the 275kV NGET substation at Hedon, near Hull, in Yorkshire<sup>2</sup>.
- 3.2 The Wind Farm will be the first commercial UK wind farm to utilise 6MW WTGs and will consist of 35 Siemens 6MW WTGs with an installed capacity of 210MW (205MW at the Offshore Boundary Point), which will be connected to an offshore substation platform (OSP) located within the boundaries of the WMR Offshore Wind Farm<sup>3</sup>.
- 3.3 The WMR Transmission Assets are currently under construction and were due to be fully operational by the end of September 2014. They will include an onshore substation, an OSP, one subsea cable and one land cable, and an OFTO-dedicated supervisory control and data acquisition (SCADA) system.
- 3.4 The WMR Transmission Assets are expected to deliver an availability of 98% taking into account both planned and unplanned maintenance.

### OWNERSHIP STRUCTURE

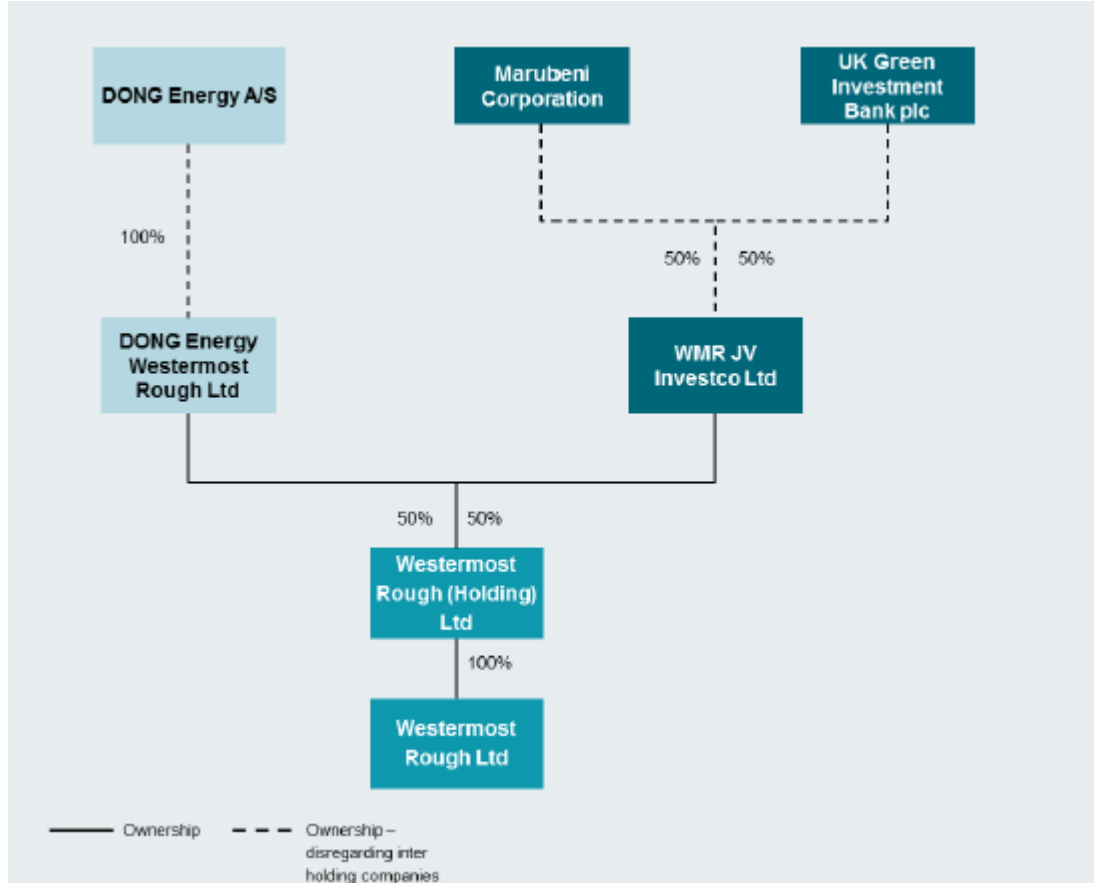
- 3.5 The WMR Offshore Wind Farm is owned by Westermost Rough Limited (WMR Ltd), an SPV ultimately jointly-owned by DONG, Marubeni and GIB.
- 3.6 DONG entered into an agreement to sell 50% of WMR Ltd to Marubeni and GIB on 31 March 2014 with each investor taking a 25% share in the project. The consortium will construct the WMR project managed by DONG under a Construction Management Agreement.

---

<sup>2</sup> Information Memorandum, dated 14 April 2014, page 7

<sup>3</sup> The difference between installed and connected capacity is attributed to array cable losses. NGET has agreed a figure of 200MW which can be exported at the onshore boundary point.

3.7 The current ownership structure of the Wind Farm is set out below<sup>4</sup>:



<sup>4</sup> Information Memorandum, dated 14 April 2014, page 10

## 4 THE WMR EX-ANTE REVIEW

### OVERVIEW

- 4.1 The main purpose of the Ex-Ante Review of the Wind Farm's Transmission Assets is to determine whether the costs as set out in the Developers' cost template for the Transmission Assets are appropriately stated to use in Ofgem's cost assessment and whether costs not directly attributable to either the Generation or Transmission Assets have been allocated between the two on a reasonable basis.
- 4.2 The starting point in our review of the cost information provided was the CAT dated 7 April 2014, which we (and Ofgem) received on 17 April 2014, and was based upon their estimates of the costs of the Transmission Assets at 31 January 2014.
- 4.3 Our analysis has considered confirmation that costs incurred relate to contracts that are either for the Transmission Assets or are for the Wind Farm in a broader sense but have a reasonable basis for allocation between Transmission Assets and other elements of the Wind Farm. The basis of allocation is different in some cases depending upon what is considered the main driver behind the relevant cost (this is usually capital cost or the degree of time/activity required in relation to different components of the Wind Farm development). In each case where an allocation is involved we have considered if the proposed method and rate of allocation are appropriate for that particular cost. We have not at this stage sought to verify that any expenditure has actually been incurred by tracing to actual payments, as that will be done for selected contracts as part of the later forensic review.
- 4.4 The cost assessment for the Transmission Assets of the Wind Farm as per the CAT is summarised below:

**Transmission Assets cost summary**

	Direct costs	Contingency	Total costs	
	£	£	£	%
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
			192,407,296	100%

4.5 Our findings in respect of the Ex-Ante Review are set out as follows:

4.5.1 The overview of the Developers' processes for accounting and procurement of the Wind Farm are set out in **Section 5**;

4.5.2 Our work in relation to costs and procurement matters which are common to the CAT as a whole are set out in **Section 6**;

4.5.3 Our work in relation to project common costs and development costs which have been allocated to the Transmission Assets, summarised on the CAT under CR2 and CR10, are set out in **Section 7**;

4.5.4 Our work in relation to costs specific to each component of the Transmission Assets, summarised on the CAT under CR3, CR4, CR5 and CR7, are set out in **Sections 8 to 11**;

4.5.5 A summary of the issues identified as part of our review are set out in **Section 12**.

**INFORMATION PROVIDED**

4.6 Grant Thornton have relied upon the following information in reviewing the cost assessment for the Wind Farm:

4.6.1 Preliminary Information Memorandum dated March 2014<sup>5</sup> and Information Memorandum dated 14 April 2014;

<sup>5</sup> Actual date not specified



- 4.6.2 information contained in the Ofgem developer data room for the WMR Wind Farm Project; and
- 4.6.3 information and explanations provided to us by the Developers. This included a visit to the Developers on 28 April 2014 to discuss the Transmission Assets and subsequent telephone calls and email correspondence with the Developers.

## 5 WMR PROCESSES

### INTRODUCTION

- 5.1 In this section, we set out the processes which have been used by the Developers in relation to the procurement of and the accounting for the Wind Farm, and in particular, the Transmission Assets.
- 5.2 From our discussions with the Developers and our review of the cost information prepared by them in respect of the Transmission Assets, it is evident that there are systems in place which will help to ensure that the cost of the Wind Farm Transmission Assets represents value for money including:
- 5.2.1 competitive tendering;
  - 5.2.2 specific planning and budgeting tools, including building on experience obtained from similar projects; and
  - 5.2.3 controls over variation orders and large expenditure items.
- 5.3 DONG, as project manager of the Wind Farm, provides the accounting team that supports the Wind Farm project and undertakes the budgeting process. DONG uses the SAP accounting system for the Wind Farm.

### DECISION MAKING PROCESSES

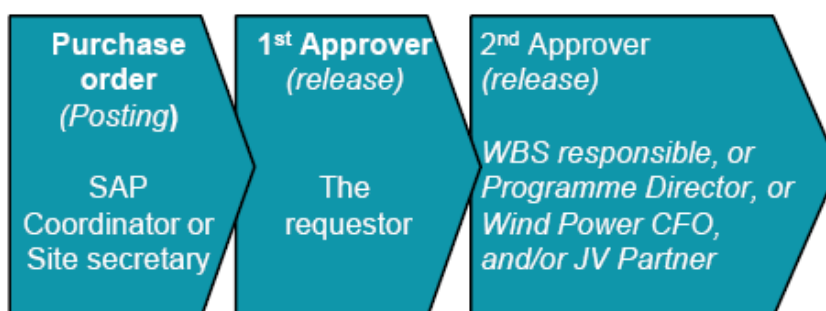
- 5.4 The decision making in the WMR programme is based on a project specific Authorisation Matrix. We have been provided with a copy of the Westermost Rough Programme – Authorisation Matrix dated 26 August 2013 (WMR Authorisation Matrix). This sets out the three steps of authorisation, namely:
- i authorisation to approve decisions (Decision Governance);
  - ii authorisation to enter commitments ie to sign contracts (Commitment Governance); and
  - iii authorisation to approve and release payments (Payment Governance).

### Accounting and budgeting process

- 5.5 The Developers operate a rigid invoice and purchase order approval process, as set out in the below diagram from the Developers<sup>6</sup>:

#### Invoice & Approval Process

---



- 5.6 For each contract, purchase orders are prepared for the costs expected to be incurred, along with a cash flow profile.
- 5.7 When the 'First approver' receives the invoice of costs incurred for 'release', the invoice amount and currency is matched against the purchase order (and the payment plan if one has been created). The 'First approver' ensures that the terms, quantities and the total amount are in accordance with both the contract and the item(s)/services(s) received from the vendor.
- 5.8 The 'Second approver', defined in the Authorisation Matrix depending upon the size and type of the invoice, approves the release of the invoice by the 'First approver'.

### Budget Change Request

- 5.9 Whenever a change in cost is expected from the budgeted amount, owing to either a change in scope or schedule, a Budget Change Request (BCR) is created.
- 5.10 The BCR process is also triggered by the transfer of budgets between packages and the usage of contingency.

<sup>6</sup> Grant Thornton Workshop Westermost Rough – Transmission Assets presentation 28 April 2014

5.11 The BCR approval process is performed on a monthly basis and requires approval from all of the below levels, in the following order:

5.11.1 Relevant Package Manager

5.11.2 EPC Director (if part of EPC scope)

5.11.3 Programme Director

5.11.4 Programme Financial Manager

5.11.5 Programme Steering Committee

5.11.6 [REDACTED]

### ***Forecasting updates***

5.12 Typically, two thorough and two light budget revisions are performed annually.

### ***Cost controlling***

5.13 Budgets are updated on a monthly basis. Monthly package reviews between 'Cost Controller' and 'Package Manager' are carried out to align actuals, commitments and resources costs, and the cause of any large deviations to the baseline are identified.

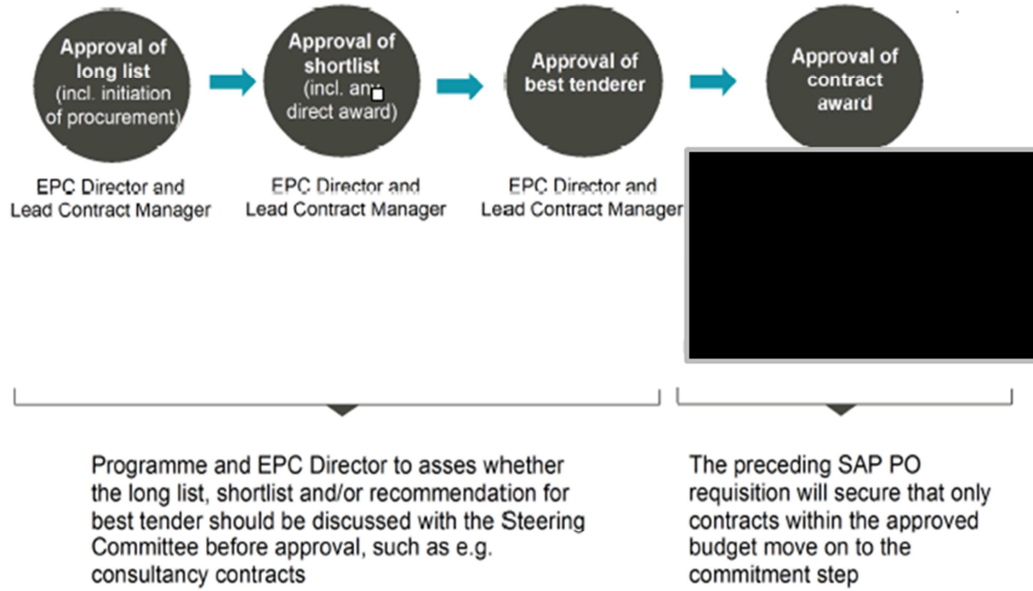
## **PROCUREMENT PROCESS**

5.14 There has been the same Lead Contract Manager for WMR since 2011. He has procedural responsibility for all procurement in the project, with 10-12 Contract Managers reporting to him.

5.15 Contract Managers are responsible for sourcing, tendering and managing a contract throughout the whole process.

5.16 The WMR Procurement Policy states that it is "*critical to proactively source for an adequate amount of bidders before the start of the Procurement Phase*" and the procurement process is set out in the WMR Authorisation Matrix dated 26 August 2013.

5.17 Procurement and contractor selection follows a four step process as set out in this diagram from the Developers below<sup>7</sup>:



5.18 All single sourcing (Direct Award ie does not issue tender material) must be pre-approved by [REDACTED]. Although many of the small contracts will be by Direct Award, none of the main contracts have been.

<sup>7</sup> WMR Procurement Presentation provided to Grant Thornton 28 April 2014 – we note £ [REDACTED] million Danish Krone ([REDACTED] MDDK) is approximately £ [REDACTED] million at current rates and SAP PO refers to a purchase order generated within the Developers SAP accounting system

- 5.19 Subsequent contractual decisions, eg variation orders, claims and amendments, follow a two-step approval process, as set out below in this diagram from the Developers<sup>8</sup>:



### Competitive tendering

- 5.20 One of the main tools used by the Developers in achieving value for money and highest compliance to requirements is the use of a competitive tendering process for the selection of companies to construct the Wind Farm.
- 5.21 We understand that the majority of contracts were put out to tender, with the Developers inviting specialist companies in each area to tender for the work. Both the 'long list' and the 'short list' of contractors are approved by the EPC Director and Lead Contract Manager.
- 5.22 The preferred number of tenders, at short list, is three, but there may be fewer invited to tender when the nature of the work means that satisfying this criteria would be impossible.
- 5.23 A direct award has to be pre-approved by the Lead Contract Manager and EPC Lead. Tender materials are not issued for a direct award, however, Quality, Health and Safety and Environmental (QHSE) and financial data are still checked. It is expected that there will still be a negotiation on price once the quote has been submitted.

<sup>8</sup> WMR Procurement Presentation provided to Grant Thornton 28 April 2014

- 5.24 The final selection of preferred bidder is based upon a mandatory evaluation model focusing on Tender Costs, Terms and Conditions, Technical Solution, Time Schedule and QHSE. The EPC team makes a recommendation of the best tender to the EPC Management and/or the Steering Committee after conducting a tender appraisal. Further to the mandatory evaluation model, each contract is treated on a case by case basis in respect of the detailed weighting that is given to certain criteria (for instance Tender Costs), which vary dependent on the package up for tender.
- 5.25 The Programme and EPC Director assess whether the long list, short list and/or recommendation for best tender should be discussed with the Steering Committee before approval.
- 5.26 The following limits have been set for the 'approval of contract award':
- 5.26.1 [REDACTED]
- 5.27 As part of our work we have reviewed tender evaluation reports for Offshore Export Cable Supply, Onshore Export Cable Supply, Offshore Export Cable Installation Contract and Offshore Substation Fabrication Contract, and our reviews in this regard are detailed in the relevant sections of this report. In line with the Developers' processes, a minimum of three tenders were shortlisted for three of the four packages reviewed, save for the Offshore Export Cable Installation Contract as a second tender was required after the first recommended tenderer pulled out of the project. There was a lower level of interest in the second tender round and only two tenders were received and considered.

### **Commitment procedures**

- 5.28 Two leading employees must jointly sign all EPC Contracts, Amendments, Variation Orders and claims. This is usually the Programme Director and the EPC Director. However, the Chairman of the Steering Committee may take the place of either.
- 5.29 Prior email approval to sign the contract is required from the chairman of the Steering Committee for commitments above [REDACTED] and from the Executive Vice President for commitments above [REDACTED]<sup>9</sup>.
- 5.30 Signing of documents occurs every Tuesday, when the Programme Director, EPC Director, Programme Procurement Manger, Lead Contract Manager and the Records Manager meet.

<sup>9</sup> Prior email approval is required at lower thresholds for Consultancy Agreements

## **COST ACCOUNTING AND ALLOCATION METHODOLOGY**

- 5.31 All costs of the Wind Farm are posted to a Work Breakdown Structure (WBS) code in the accounting system. There are 253 WBS codes<sup>10</sup> making up the costs of the Wind Farm. Costs have been grouped dependent on the cost activity that they relate to and whether they relate entirely to Transmission or Generation Assets, or to the Wind Farm as a whole (shared costs).
- 5.32 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
  - offices –London, Copenhagen and on site; and
  - SCADA equipment benefiting both the Transmission and Generating Assets.
- 5.33 At the date of the Final Investment Decision (FID), the indicative Transmission Asset portion of shared costs was set to 25%. This was based on the percentage of costs that are directly attributable to the Transmission Assets CAPEX as a share of total CAPEX for that plus the directly attributable CAPEX elements for the generation assets. This is a common method of cost allocation which we have seen on other Wind Farm projects.

---

<sup>10</sup> Cost Allocation Methodology note dated 17 April 2014. From our review of the Transmission Assets we have identified 171 WBS codes with amounts allocated to them within the CAT



5.34 The following table from the Developers sets out the applied allocation percentage which have been used since FID<sup>11</sup>:

%	Description	Examples	Allocation calculation
<b>Supply, Installation &amp; Materials</b>			
0,0%	No relation to Transmission assets directly or indirectly	<i>Turbine Supply</i>	N/A
100,0%	Direct relation to Transmission assets	<i>Export Cable Supply</i>	N/A
25,0%	Partly related to Transmission assets	<i>Selected SCADA assets/activites</i>	Pro rata allocation based on overall direct Generator vs Transmission costs
<b>Resources, Consultants &amp; Travel</b>			
0,0%	No relation to Transmission assets directly or indirectly	<i>Turbine commissioning resources</i>	N/A
100,0%	Direct relation to Transmission assets	<i>Substation Commission resources</i>	N/A
25,0%	Partly related to Transmission assets	<i>Project Management resources</i>	Pro rata allocation based on overall direct Generator vs Transmission resources
<b>Other</b>			
25,0%	Insurance	<i>CAR insurance</i>	Pro rata allocation based on overall direct Generator vs Transmission costs
0-100%	Contingency	<i>Weather risk for offshore platform installation</i>	Based on P80 Risk register

5.35 The Developers have stated that unforeseen events (positive or negative) in either Generation Assets or Transmission Assets can change the “Pro rata allocation based on overall direct Generator vs Transmission costs” percentage allocation of 25%, and this should therefore be seen as indicative and subject to a degree of uncertainty. The latest indications are that the Transmission Asset CAPEX is expected to be slightly lower than the initial estimate.

<sup>11</sup> Cost Allocation Methodology note dated 17 April 2014

- 5.36 We understand the Developers are to review the methodology for allocation of common costs once all other areas of the cost assessment have been agreed, as such, the allocation rate for costs which are “Partly related to Transmission assets” within the CAT remains at 25%.

## 6 COSTS COMMON TO THE TRANSMISSION ASSETS AS A WHOLE

### INTRODUCTION

- 6.1 Whilst the CAT has broken down the costs of the Transmission Assets into distinct areas, largely based upon the separate components which make up the Transmission Assets, there are a number of types of cost and cost principles which are common to the Transmission Assets as a whole.
- 6.2 As such, we have summarised the work that we have undertaken in relation to these costs and cost principles in this section, and we cross refer to our findings in relation to such costs and cost principles in the later sections of this report.


### COSTS

#### Resources

- 6.3 The CAT contains resources costs amounting to £[REDACTED], which is broken down as follows:

	CR2	CR3	CR4	CR5	CR7	Total
	£	£	£	£	£	£
Commercial	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Consents	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Electrical	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
EPC Management	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Offshore platform	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Onshore civil	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Programme	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Site and commissioning	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

- 6.4 To enable us to verify engineering and management hours, we have been provided with a schedule of hours by package, which breaks down the number of hours spent by each individual within the various lines included within the CAT. It also forecasts the remaining hours that will be required to complete the project.

- 6.5 The Developers have calculated an average hourly rate by reference to the number of hours per the schedule and the total cost in respect of each type of activity (ie electrical, EPC management etc). We set out the average hourly rates as quoted below:
- 
- 6.6 The Developers have explained the hourly rates applied in the WMR budget are comprised as follows:
- 6.6.1 direct costs - wages, pension, social security, statutory supplements etc
- 6.6.2 common cost wind power and area - overhead costs from the relevant functional area (eg market development and asset management)
- 6.6.3 group overhead costs - costs from DONG and shared support functions; and
- 6.6.4 profit element - to ensure compliance with transfer pricing requirements, a profit element is included for all cross entity activities.
- 6.7 Whilst we consider that most components of the hourly rate are what we would expect to see, as the Transmission Assets are being sold to the OFTO at cost, we do not consider that the hourly rates should include profit element. However, we have not been provided with information which breaks down the hourly rates into constituent parts, and are therefore unable to quantify the impact of this adjustment on the cost of the Transmission Assets.
- 6.8 We recommend that Ofgem's technical advisers should review the breakdowns provided of the number of hours by activity and the hourly rates used in order to assess whether the number of hours spent and the hourly rates are efficiently incurred.
- 6.9 We have reviewed the information provided in relation to resources hours and hourly rates and conducted a verification exercise whereby we have applied the number of hours and the OFTO-related average salary rate to each line on the CAT. The salary rates are averages and therefore, we would expect differences on each individual line.

- 6.10 Within the hourly-overview information provided we identified salary costs in 11 WBS codes, amounting to £ [REDACTED], that are not included on the CAT. The Developers have explained that nine of these are Array-Cable related and therefore it is correct that the costs are not included in the CAT (but should be removed from the hourly-overview spreadsheet). The other two codes<sup>12</sup> should be included within the CAT, although currently do not have any hours charged to them and so the Developers will include at the next full cost-update<sup>13</sup>.
- 6.11 The re-performance exercise resulted in insignificant differences between each line on the CAT and therefore we were able to verify the total cost of resources included within the CAT of £ [REDACTED] [REDACTED].

### Travel costs

- 6.12 The total amount of travel costs included within the CAT are as follows:

#### Travel costs

	Travel costs per CAT £	Supporting information provided £
<b>CR2 - Project common costs</b>		
WMR Travel, meetings etc - Programme Management	[REDACTED]	[REDACTED]
WMR Travel and meetings - Consents	[REDACTED]	[REDACTED]
WMR Travel and meetings – Commercial	[REDACTED]	[REDACTED]
WMR Travel and meetings - OFTO - Commercial - Transaction Budget	[REDACTED]	[REDACTED]
WMR Travel & Meetings - EPC management	[REDACTED]	[REDACTED]
WMR Travel & Meetings – SCADA	[REDACTED]	[REDACTED]
WMR Travel & Meetings – Site	[REDACTED]	[REDACTED]
<b>CR 3 - Offshore substation</b>		
WMR Travel & Meetings - high voltage/medium voltage (HV/MV) Offshore	[REDACTED]	[REDACTED]
WMR Travel & Meetings - Offshore platform	[REDACTED]	[REDACTED]
<b>CR 4 - Submarine cable</b>		
WMR Travel & Meetings - Offshore export cable	[REDACTED]	[REDACTED]
<b>CR5 - Land cable</b>		
WMR Travel & Meetings - Onshore export cable	[REDACTED]	[REDACTED]
<b>CR 7 - Onshore substation</b>		

<sup>12</sup> WBS 2-00499-30-04-03 (WMR Commercial- cost control OFTO) and WBS 2-00499-53-06-02-01-01 (WMR Management –HV/MV Offshore)

<sup>13</sup> Email from Andrew Moreland dated 18 September 2014 17:52

WMR Travel & Meetings – Electrical	█	█
WMR Travel & Meetings - HV/MV Onshore	█	█
WMR Travel & Meetings - Onshore Civil	█	█
	█	█

6.13 The amounts in the above table for which no supporting information has been provided are all individually below £250,000 in value. We therefore consider all other amounts to be individually insignificant and have not looked into these further. As a result, we conclude, as reflected in **Appendix 1**, that we have agreed all of the travel costs in principle.

6.14 The Developers have provided us with a breakdown of the budgets for the travel costs as determined at FID and we have compared them to the current amounts included in the CAT as follows:

**Travel costs**

	Travel costs CAT	Budgeted per FID	Additional costs	
	£	£	£	£
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█
█	█	█	█	█

6.15 As shown in the above table, the most significant movement in current travel costs compared to the amounts budgeted at FID is in respect of the offshore platform. The Developers have explained that this is as a result of increased travel to and from France in respect of the STX France contract. Though it is difficult to fully assess whether the changes in travel costs are justified without seeing invoices, which may be covered by the Ex-Post Review, we have not identified any cause for concern at this stage.

**Contingencies**

**Methodology**

6.16 The Developers have conducted a detailed exercise in order to calculate the contingency provision for the projects, based on the WMR Risk Register.

- 6.17 The Risk Register records all significant project risks and is maintained by the Risk Manager in collaboration with the Project Managers on an on-going basis, so that current project risk and contingencies can be evaluated continuously.
- 6.18 A quantitative risk assessment is undertaken to quantify the combined effects of all risks and uncertainties of the project. The likelihood of different CAPEX outcomes are estimated using Monte Carlo simulation techniques<sup>14</sup> (applying the P80-value, representing the maximum costs overrun with 80% certainty) which enable the Project Manager to estimate the risk and the level of contingency in monetary-terms.
- 6.19 The Developers consider this as best practice for large EPC projects.

### **Calculation**

- 6.20 The contingency provision included within the CAT, approximating 6% of pre-contingency capital costs, is set out in the table below:

#### **Contingencies**

	£
Project common costs	■
Offshore substation	■
Submarine cable	■
Onshore substation	■
	■

- 6.21 The amount of the contingency provision is lower as a percentage of capital costs than on other projects, and has reduced significantly since the October 2013 CAT submissions due to the progress of the development relative to other projects we have seen. The remaining contingency relating to the Transmission Assets represents the Developers' current assessment based upon the methodology stated above.

<sup>14</sup> This is a mathematical technique which allows risk to be accounted for in quantitative analysis and decision making. Monte Carlo simulation furnishes the decision-maker with a range of possible outcomes and the probabilities they will occur for any choice of action

- 6.22 We note that this contingency provision is based upon the CAT, as prepared in April 2014, and the current value of contingency related to the Transmission Assets is likely to have decreased. We understand that the Developers have advised Ofgem that they do not expect to make any adjustments to the CAT based on the current contingency. However, the Developers have informed Ofgem that the current value of contingency relating to the Transmission Assets is £[REDACTED] million.
- 6.23 By the time of the Ex-Post Review, the value of contingencies will fall to zero, as all costs will be known at this stage.

### ***Verification work***

- 6.24 We have discussed the contingency provision with the Developers, and sought an overview of the key OFTO-related risks associated with the contingency and explanations for all large amounts (>£250,000) included within the provision.
- 6.25 The Developers have provided us with the document "WMT OFTO Contingency note" which sets out a breakdown of contingencies based on the P-80 risk approach, along with a list of the key risks included in P80 risks, alongside a schedule detailing the top 15 key risks in relation to the Transmission Assets. This schedule describes the risk, its cause and mitigation measures. It assigns a probability to the risk occurring and a pre-mitigation and expected value. It also assigns the probability of the risk happening post-mitigation and the expected value. The share attributable to the Transmission Assets is then recorded.
- 6.26 The key figures are summarised below, and we have agreed amounts to the schedule of the top 15 key risks where included.

### ***Project common costs***

- 6.27 Contingencies in relation to common costs can be further broken down into overall project management risks (£[REDACTED] million), site and commissioning risks (£[REDACTED] million) and other electrical risks (£[REDACTED] million).
- 6.28 These have been made to cover:
- 6.28.1 inadequate actions due to excess time pressure on individuals;
  - 6.28.2 accumulated project delay; and
  - 6.28.3 insufficient capacity of human resources for WMR.



***Offshore substation***

- 6.29 Contingencies of £[REDACTED] million have been made to cover:
- 6.29.1 delay during fabrication due to late design information from the electrical interfaces;
  - 6.29.2 unforeseen variation orders in the installation contract; and
  - 6.29.3 damage to the offshore platform components during installation.

***Submarine cable***

- 6.30 Contingencies of £[REDACTED] million have been made to cover:
- 6.30.1 delay to export cable to offshore substation installation due to late delivery;
  - 6.30.2 damage to offshore export cables during installation; and
  - 6.30.3 delay to offshore cable installation due to project manager/client action/inaction.

***Onshore substation***

- 6.31 Contingencies of £[REDACTED] million have been made to cover:
- 6.31.1 possible gaps in specifications and documentation between packages of work;
  - 6.31.2 tight space on site for multiple contractors may restrict movements and work; and
  - 6.31.3 unacceptable level of transformer noise.

***Technical review***

- 6.32 Whilst we have reviewed the risks included within the list of the top 15 risks for the Transmission Assets, which appear reasonable risks in regard to the Transmission Assets, we consider that the assessment of the expected value of risks and of the likelihood of each event occurring fall within the scope of a technical assessment, rather than the Ex-Ante Review. On that basis, we cannot say whether these amounts which form the basis for the contingency provision are correct.

### **Interest during construction**

- 6.33 The CAT includes the Developers' nominal pre-tax interest charge of ██████ % for the period to the end of construction, estimated at August 2014, after which the project is expected to be generating power and thus beyond this time the Developer will cease to earn interest. The Developers' interest cost for the Transmission Assets totals £█████.

### **COST PRINCIPLES**

#### **Foreign exchange**

##### ***Accounting for foreign exchange in the CAT***

- 6.34 During the development of the Transmission Assets, costs will be payable in foreign currencies; either Euros, US Dollars or Danish Krone (DKK). Furthermore, as DONG is based in Denmark, a number of project management costs are also likely to be paid in DKK.
- 6.35 The Transmission Assets cost estimate applied in the CAT is based on the documented currency for each of the underlying contracts, for resources, travel, etc. Where costs have not yet been incurred or committed through a contract, an assessment has been made of the exchange rates which are most likely to be applied.
- 6.36 In DONG's internal systems, a set of foreign exchange rates are applied, which converts the budget into DKK. The internal budget is then converted into sterling budget, which is used for the CAT.
- 6.37 The cost reconciliation schedule provided by the Developers<sup>15</sup>, provides a detailed breakdown of £█████ million of costs relating to main contracts, other contracts and the main estimates to complete. Of these costs, £█████ million (█████ % of the Transmission Asset costs) are denominated in either Euros or Danish Krone as per the below table:

<sup>15</sup> "140508 OFTO Cost Reconciliation v3EXT\_FINAL.xlsx"

### Costs denominated in foreign currencies

	Euros	£ equivalent	DKK	£ equivalent	Total £
Project common costs	■	■	■	■	■
Offshore substation	■	■	■	■	■
Submarine cable supply and installation	■	■	■	■	■
Land cable supply and installation	■	■	■	■	■
Onshore substation	■	■	■	■	■
	■	■	■	■	■
Effective exchange rate	■	■	■	■	■

6.38 Furthermore as DONG is based in Denmark, as mentioned in paragraph 6.34 above, we consider that the majority of resources costs (£■■■■ million) and travel costs (£■■■■ million) are also likely to be paid in foreign currencies. As such, we consider that at least £■■■■ million<sup>16</sup> (■■■■ %) of the Transmission Assets costs are expected to be payable in currencies other than Sterling.

6.39 The Developers have since provided the following split of OFTO capital costs (excluding DEVEX, contingency and IDC):

- ■■■■
- ■■■■
- ■■■■
- ■■■■

6.40 OFTO capital costs (excluding DEVEX, contingency and IDC), included within the CAT, total £■■■■ million. Applying the percentages provided by the Developers results in costs to be paid in foreign currencies of £■■■■ million (DKK - £■■■■ and EUR - £■■■■).

6.41 These costs are comparable with our initial assessment and therefore we consider that OFTO costs in the region of £■■■■ million will be payable in currencies other than Sterling, and therefore be exposed to FX risks.

<sup>16</sup> Being ■■■■ million

**Rates used**

6.42 The Developers have used the following rates to translate amounts payable in foreign currencies in to DKK, which have in turn been used to translate all amounts in the CAT into Sterling:

- [REDACTED]

6.43 This has resulted in effective exchange rates in the CAT of [REDACTED] and [REDACTED], and unless stated otherwise in the remainder of the report, these are the rates which have been used to convert Transmission Asset costs into Sterling.

6.44 Whilst we have not been provided with the Developers' calculations of the rates used, and are therefore unable to verify their accuracy, we have compared the rates used to the average exchange rate during the period<sup>17</sup> in which much of the Transmission Assets costs were incurred (being January 2013 and June 2014). The rates obtained, are as set out below:

- [REDACTED]

6.45 These rates are very similar to those used by the Developer (the biggest difference relating to USD, of which we understand there are no costs included within the CAT) and therefore we consider the rates used in the CAT to be reasonable.

**Mitigation of foreign exchange risk**

6.46 DONG's Market Risk Management Team is responsible for hedging against the FX risks in relation to CAPEX expenses. In general, it hedges the currency positions based on monthly CAPEX input from the DONG Wind Power division using the relevant forward rates.

6.47 The FX risk is initially hedged by DONG using market information from Bloomberg Markets, applying relevant forward prices to each of the cash flows in the quarters when they expect to incur expenses in a foreign currency, as supplied by the relevant project.

6.48 DONG Wind Power provides DONG Group with monthly updates of the CAPEX programme allowing them to make delta hedges using the forward rates from the trade date of the delta hedges, to give an overall net hedge of the required amount.

---

<sup>17</sup> Source: Oanda, currency convertor website

**Application of overriding global discounts**

- 6.49 The Developers have confirmed that no global discounts have been obtained in the course of the project.

**Taxation status**

- 6.50 The Developers have confirmed that the transmission business will be transferred as a going concern with the benefit of tax reliefs, and have confirmed that capital allowances on the Transmission Assets will not be claimed during the construction phase.

**Related party transactions**

- 6.51 The Developers have confirmed that there have been no related party transactions, other than staffing.

**Boundaries used for purposes of cost allocation**

- 6.52 The Preliminary Information Memorandum confirms the boundary points of the Transmission Assets proposed by the Developers, as follows:
- offshore – located at the 150/34kV transformer 34kV LV terminals
  - onshore – located at the interface flanges/gas barriers between busbar selector disconnectors owned by WMR and NGET busbars contained within the existing NGET Hedon 275kV substation.
- 6.53 The details that we have seen reflect costs between these two boundary points.



## WMR Offshore Site Operation Running Costs

- 7.2 The Developers have entered into one main contract in relation to offshore site operation running costs. We summarise and discuss this contract below:

Contractor	Original contract value		Current contract value		Amount agreed	
	DKK	£	DKK	£	DKK	£
Loxam Rental A/S	████	████	████	████	████	████
Other contracts	████	████	████	████	████	████
Total contract value	████	████	████	████	████	████
OFTO %	████	████	████	████	████	████
Total OFTO	████	████	████	████	████	████
Remaining <sup>18</sup>	████	████	████	████	████	████
	████	████	████	████	████	████

- 7.3 The Developers have entered into a contract with Loxam Rental A/S for the provision of EPC site offices for the amount of █████ DKK (£████), which we have agreed to the underlying contract. Other, individually insignificant minor contracts have been agreed to a breakdown, totalling in excess of £████. Of the total amount in sterling (£████), 25% has been attributed to the Transmission Assets (£████).
- 7.4 An amount of £████ is included in the CAT for further variation orders in relation to offshore site operation running costs. This amount is below £100,000 and therefore no further explanations have been sought.

<sup>18</sup> “Remaining” refers to the column on the Developers’ spreadsheet “140508 OFTO Cost Reconciliation v3EXT\_FINAL.xlsx”. This column contains all costs which have not been allocated to one of the resources, travel, consultants, insurance, main contracts, other contracts and estimates to complete columns

## WMR Crew Boats

- 7.5 The Developers have entered into two main contracts in relation to crew boats. We summarise the contracts below and discuss each in turn:

Contractor	Original contract value		Current contract value		Amount agreed	
	£		£		£	
█	█	█	█	█	█	█
█	█	█	█	█	█	█
Total contract value	█		█		█	
OFTO %	25%		25%		25%	
Total OFTO	█		█		█	
<i>Estimated costs to complete</i>	█		█		█	
<i>Remaining</i>	█		█		█	
	█		█		█	

- 7.6 The Developers entered into a contract with Turbine Transfers Ltd for the supply of crew vessels for the amount of £█. The cost is spread across five main contracts (█) and has been calculated by the period of supply and daily rates as specified in the respective contracts. The supporting schedule provided shows a maximum amount due under this contract of £█, depending on the rates actually incurred, which vary with the weather conditions. 25% of the contract has been attributed to the Transmission Assets, with £█ (25% of £█) being included within the CAT. Given the uncertainty over the possible weather conditions, we do not propose an adjustment to the CAT in respect of this contract.
- 7.7 The Developers entered into a contract with Seacat Services Limited for the supply of crew vessels for the amount of £█. The cost is spread across two main contracts (█) and has been calculated by the period of supply and daily rates as specified in the respective contracts. The supporting schedule provided shows a maximum amount due under this contract of £█, depending on the rates actually incurred, which vary with the weather conditions. 25% of the contract has been attributed to the Transmission Assets with £█ (25% of £█) being included within the CAT. Given the uncertainty over the possible weather conditions, we do not propose an adjustment to the CAT in respect of this contract.



- 7.8 Further estimated costs of £[REDACTED] and [REDACTED] DKK are included in the CAT for site and commissioning. This is made up of £[REDACTED] for fuel (non-committed), £[REDACTED] and [REDACTED] DKK (£[REDACTED]) for potential further crew vessels. The total amount in sterling is £[REDACTED], of which, 25% has been attributed to the Transmission Assets (£[REDACTED]). The Developers have been able to provide a calculation to support estimated costs to complete of £[REDACTED]. Of the remaining £[REDACTED], £[REDACTED] relates to a fuel allowance and £[REDACTED] is unsubstantiated and therefore the Developers have proposed an adjustment for a decrease to the CAT of this amount.
- 7.9 The Developers have described the process related to the estimated fuel allowance, but have not been able to provide any documentary evidence. We do not consider this to be sufficient evidence to support the cost and so propose a further reduction to the CAT for the £[REDACTED]. We understand that the Developers have agreed to process this adjustment.
- 7.10 Also included within the CAT is a further £[REDACTED] of costs which we understand may relate to further variation orders in relation to crew boats. As this is below £100,000, no further testing has been performed.

### **Resources, travel and contingency costs**

- 7.11 Information in relation to resources, travel and contingency costs, including our verification work, is set out in **Section 6**.

## Consultancy costs

- 7.12 The CAT includes a number of consultancy costs in relation to Wind Farm activities which will require external support in respect of programmes, consents, commercial contracts, EPC management and site and commissioning, as summarised below:

	Total cost £	OFTO %	Transmission Asset cost £
WMR Externals consultancy – Programme Management	█	█	█
WMR Externals consultancy - Consents	█	█	█
WMR Externals consultancy - Commercial	█	█	█
WMR Externals consultancy - OFTO - Commercial - Transaction Budget	█	█	█
WMR Externals consultancy - EPC Mgmt	█	█	█
WMR Externals consultancy - Site	█	█	█
<b>Consultancy costs</b>	█		█

- 7.13 We have been provided with a breakdown of expected costs along with the following explanations as to why consultants are required, upon which we comment below:

7.13.1 **Programme Management - legal, communication and advisory services:** No costs have been incurred to date. The total value is beneath £100,000 and therefore no further testing has been performed.

7.13.2 **Consents:** the consultancy budget covers activities such as support to negotiations with Marine Management Organisation and others regarding description of coastal processes and establishment of an approved monitoring programme, site and land right negotiations with landowners and entering into lease agreements, measuring and advice regarding onshore piling noise that has caused some complaints and legal advice on matters relating to consents and discharge of conditions. A total cost of £█ has been spent already or is committed. A detailed breakdown has been provided, showing commitments with a number of suppliers, each below £100,000.

7.13.3 **Commercial:** - the consultancy budget for commercial driven activities could require external consultancy support, such as tax, VAT or accounting services. The total value is beneath £100,000 and therefore no further testing has been performed.

- 7.13.4 **Commercial OFTO:** this budget is directly related to WMR OFTO disposal transaction and the consultancy budget covers external legal counsel, technical consultants, finance and tax advice and real estate advice. Costs to date total £[REDACTED] for actual and committed costs. The OFTO Commercial Transaction Budget external consultancy cost is wholly attributable to the Transmission Assets and is directly related to the WMR OFTO Disposal transaction. External legal advice has been sought from Watson, Farley and Williams LLP over the duration of the transaction. Fees are estimated at £[REDACTED] million. Other consultancy services relate to external tax advice (£[REDACTED]), technical consultation (£[REDACTED]), environmental, land rights, consents consultants (£[REDACTED]) and general technical advice (£[REDACTED]).
- 7.13.5 **EPC Management:** - legal support to contract negotiations, specialist support and languages services. The consultancy budget for overall EPC activities that could require external consultancy support, such as legal support to contract negotiations, specialist support and language services. No contracts or terms of engagement have been provided in support of these costs. Service providers engaged on the project to date are; WolfWay ApS for project management support services, PMSS - consultancy group for project management support services, Kromann Reumert for external legal counsel, and Lionbridge Denmark A/S for language services. The share attributable to the Transmission Assets of each contract is individually insignificant at £[REDACTED]. The remaining £[REDACTED] attributable to the Transmission Assets has been based on supporting calculations. The Developers have subsequently informed us that they have processed an adjustment to reduce EPC management consultancy costs by £[REDACTED].

7.13.6 **Site and commissioning:** - The Developers have informed us that there is a need for external consultants in relation to the site and commissioning activities, of which some of the package staff will be consultants. At FID this ad hoc support from consultants was anticipated from archaeologists, ecologists, marine biologists, DEEP-pilots, DEEP assistants, harbour architects, local harbour experts and project personnel support. Expo Partner and Kelvin Energy are the only external consultants engaged to date on the WMR site and commissioning package. Kelvin Energy is supplying a Site Logistic Manager for the onshore site, who works with the WMR project as a full time employee. The share attributable to the Transmission Assets of each contract is individually insignificant at £[REDACTED]. The remaining £[REDACTED] attributable to the Transmission Assets has been based on supporting calculations. The Developers have subsequently informed us that they are to process an adjustment to reduce the cost of site and commissioning consultancy costs by £[REDACTED].

### Insurance

- 7.14 The CAT includes an amount of £[REDACTED], representing an allocation of the Wind Farm's insurance costs at a rate of 25%. The Wind Farm's Constructions All Risks and Third Party Liability policy with Aon covers the period 1 November 2012 to 31 December 2014. The full cost of the policy is €[REDACTED] (£[REDACTED]), adjustable at [REDACTED]% on Full Contract Value for construction physical damage. A further £[REDACTED] has been charged for third party liability.
- 7.15 Whilst we have not been provided with supporting calculations of the insurance cost included within the CAT, the cost of the policy and the third party liability charge equates to £[REDACTED], which largely substantiates the cost.

### Other contracts

- 7.16 The Developers entered into various contracts regarding environmental surveys (Marine Management Organisation, noise, bird monitoring, fish and shellfish etc). These other contracts amount to £[REDACTED], 25% of which is attributable to the Transmission Assets (£[REDACTED]). This includes estimated costs to complete of £[REDACTED] million (£[REDACTED] attributable to the Transmission Assets) in respect of MMO and noise level.

### Estimates to complete

- 7.17 We have been provided with a schedule by the Developers giving a narrative regarding the estimated costs to complete, which amounts to £[REDACTED]. A summary is provided at **Appendix 2**. The vast majority of costs are individually insignificant to the Transmission Assets and have therefore not been tested. The Developers are unable to provide documentary evidence to substantiate £[REDACTED] of the total costs of £[REDACTED] and have therefore agreed that the CAT should be reduced by this amount.

### GENERAL DEVELOPMENT COSTS

- 7.18 General development costs (DEVEX) are incurred in the WMR project development activities and include all activities in the initial commencement of the project, including ensuring consents and establishing a solid FID-case. The preliminary allocation of DEVEX was based on a [REDACTED] % allocation rate, implying a Transmission Asset DEVEX of £[REDACTED], as included in the CAT.
- 7.19 However, when DEVEX is broken down WBS-by-WBS, the implied OFTO share is [REDACTED] % (rather than 25%). We have been provided with a schedule by the Developers which breaks down its current assessment of DEVEX by year and by workstream, amounting to £[REDACTED]<sup>19</sup> which is an increase of £[REDACTED] on the amount included in the CAT due to the increase in allocation rate. We understand that the Developers are to adjust the CAT for this increase. This schedule is summarised below.

<sup>19</sup> Information provided in round thousands only. However, we have confirmed the exact total is £[REDACTED]

7.20 General development costs comprise the following:

#### CR 10 - General development costs

	Total cost £'000 <sup>20</sup>	OFTO %	Transmission Asset cost
EPC Management	████	████	████
Electrical	████	████	████
Consent	████	████	████
Programme	████	████	████
Onshore civil	████	████	████
Foundations	████	████	████
WTG	████	████	████
Offshore platform	████	████	████
Site and commissioning	████	████	████
Operations	████	████	████
	████	████	████

7.21 The costs above have been agreed to a detailed breakdown of the costs incurred, provided by the Developers.

7.22 Whilst the allocation rate for most cost areas is consistent with the methodology summarised at paragraph 5.34, the Developers consider that as electrical costs are largely driven by the Transmission Assets, they have allocated electrical DEVEX at a higher rate than for other categories. The Developers have provided a spreadsheet to substantiate the █████ % rate used<sup>21</sup>. However, Ofgem may wish to work with its technical advisers to consider whether such a sub-separation is appropriate and if so, whether this percentage reflects what would be expected.

#### ALLOCATION OF PROJECT COMMON COSTS

7.23 The CAT contains £████ of project common costs, representing an allocation of total Wind Farm costs at a rate of █████ %, and calculated as described in paragraphs 5.34 to 5.36.

<sup>20</sup> ibid

<sup>21</sup> WMR cost assessment - DEVEX update\_20140923.xlsx – we note that the analysis in this spreadsheet calculates a slightly higher allocation rate of █████ %. However, no adjustment is proposed.

7.24 Based upon cost information provided by the Developers, the percentage of Wind Farm directly attributable costs which relate to the Transmission Assets is █████ %<sup>22</sup>. We note that this is likely to have reduced further as a result of the adjustments to the CAT that we understand the Developers are going to process. We understand that the allocation rate is going to be evaluated by the Developers once all other areas of the cost assessment for the ITV phase have been agreed. We therefore do not propose any adjustment but a reduction to project common costs is likely to be required once the new rate has been established.

---

<sup>22</sup> Being █████ per “WMR OFTO CAT presentation – Grant Thornton Workshop 20140428”

## 8 OFFSHORE SUBSTATION

8.1 The offshore substation costs are comprised as follows:

### CR3 - Offshore substation costs

	Ref	£
<b>WMR Supply - HV/MV Offshore</b>		
█	█	█
█	█	█
█	█	█
█	█	█
█	█	█
<b>WMR Supply - STX Foundation +Topside platform</b>		
█	█	█
█	█	█
█	█	█
<b>WMR Supply - Minor Contracts – platform</b>		
█	█	█
█	█	█
█	█	█
<b>WMR Installation - Offshore substation/platform</b>		
█	█	█
█	█	█
█	█	█
█	█	█
█	█	█
█	█	█
█	█	█
█	█	█
█	█	█



## WMR Supply – HV/MV Offshore

- 8.2 The Developers have entered into three main contracts in relation to HV/MV onshore supply. We summarise the contracts below and discuss each in turn:

Contractor	Original contract value		Current contract value		Amount agreed	
	€/DKK	£	€/DKK	£	€/DKK	£
<b>Euro Denominated Contracts</b>						
Moswer-Glaser Ltd	████	████	████	████	████	████
CG Electric Systems	████	████	████	████	████	████
<b>DKK Denominated Contracts</b>						
Siemens A/S	████	████	████	████	████	████
<i>Remaining costs to complete</i>				████		████
		████		████		████

- 8.3 The Developers entered into a contract with Moswer-Glaser Ltd for the provision of busbar system supply for the amount of €████ (£████), which we have agreed to the underlying contract. There have been no subsequent variations.
- 8.4 The Developers entered into a contract with CG Electric Systems for the provision of offshore substation transformer supply for the amount of €████ (£████), which we have agreed to the underlying contract. Variations to the contract have been made, such that the latest expected amount payable under this contract totals €████ (£████), which we have agreed in its entirety.
- 8.5 The Developers entered into a contract with Siemens A/S for the provision of offshore substation switchgear supply for the amount of █████ DKK (£████), which we have agreed to the underlying contract. Variations to the contract have been made, such that the latest expected amount payable under this contract totals █████ DKK (£████), of which, we have agreed █████ DKK (£████) to the original contract plus subsequent variation orders. The additional costs of █████ DKK (£████) which we have verified above the latest expected amount payable, may be as a result of some of the variation orders not having been included within the CAT. The Developers have agreed that an increase of £████ to the CAT is required.

- 8.6 The CAT includes a further £ [REDACTED] of costs which we understand may relate to further variation orders in relation to HV/MV offshore supply contract detailed at paragraph 8.5 above. The Developers have explained that further variation orders totalling £ [REDACTED] are expected, and have proposed a reduction in the value of the CAT of £ [REDACTED] in respect to the remaining over provision.

### WMR Supply - STX foundation and topside platform

- 8.7 The Developers have entered into one main contract in relation to STX foundation and topside platform supply. We summarise and discuss this contract below:

Contractor	Original contract value		Current contract value		Amount agreed	
	€	£	€	£	€	£
[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]

- 8.8 For the tender process for the supply of the offshore substation platform, three companies were invited to tender, all three submitting tenders and being shortlisted:

- [REDACTED]

- 8.9 The tender evaluation documentation shows that the basis for recommendation was to identify the most economically advantageous compliant tender. Weighting of [REDACTED] A recommendation was made to award the work to STX after it achieved [REDACTED].

- 8.10 Further to the award of the tender, the Developers entered into a contract with STX France SA for the provision of offshore platform supply for the amount of € [REDACTED] (£ [REDACTED]), which we have agreed to the underlying contract. We do not know the reason for the difference between the amount of the tender and the contract. Variations to the contract have been made, such that the latest expected amount payable under the contract totals € [REDACTED] (£ [REDACTED]), of which we have agreed € [REDACTED] (£ [REDACTED]) to the original contract plus subsequent variation orders. No information has been provided to support the remaining € [REDACTED] (£ [REDACTED]) of costs and therefore we suggest that the CAT be decreased by this amount. We understand that the Developers have agreed to process this adjustment.

- 8.11 During our review procedures, the Developers informed us they had also entered into a contract with Det Norske Veritas, Danmark A/S for certification of WMR Offshore Substation and WMR Site Conditions. To August 2014, we have been able to verify costs of € [REDACTED] (£ [REDACTED]) that have not been included within the CAT. We understand that the Developers have agreed an increase to the CAT of £ [REDACTED] in respect of this contract.
- 8.12 Further estimated costs totalling £ [REDACTED] are included in the CAT in relation to potential variation orders from STX regarding adjustment of scope or schedule. A variation order supporting changes to the scope of work is in the process of being agreed, for a sum of £ [REDACTED]. The remaining estimates to complete relate to individually small claims from STX France, likely to be wrapped up within a future variation order (VO-07) relating to increase scope of works.

### WMR Supply - Minor Contracts - platform

- 8.13 The Developers have entered into one main contract in relation to minor contracts - platform supply. We summarise and discuss this contract below:

Contractor	Original contract value		Current contract value		Amount agreed	
	DKK	£	DKK	£	DKK	£
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

- 8.14 The Developers entered into a contract with FORCE Technology for the provision of offshore platform fabrication supervision for the amount of [REDACTED] DKK (£ [REDACTED]), which we have not been able to agree to the underlying contract. The cost is based upon a daily rate. The Developers have provided us with a SAP screenshot which listed invoices. We have not seen the invoices to which the screenshot refers. Whilst we do not consider this to be satisfactory evidence, Ofgem have advised us that they have discussed and agreed this contract with the Developers, such that the CAT does not need to be adjusted for this amount (£ [REDACTED]). We therefore conclude that this contract and the associated cost has been verified.
- 8.15 A total of £ [REDACTED] of remaining costs to complete is included for further variation orders in relation to minor contracts for the platform supply. This amount is beneath £100,000 and therefore, has not been investigated in further detail.

### WMR - Offshore substation/platform installation

- 8.16 The Developers have entered into one main contract in relation to offshore substation installation. We summarise this contract below:

Contractor	Original contract value		Current contract value		Amount agreed	
	€	£	€	£	€	£
████	████	████	████	████	████	████
████	████	████	████	████	████	████
████	████	████	████	████	████	████

- 8.17 The Developers entered into a contract with Seaway Heavy Lifting Contracting Limited for the provision of offshore platform installation for the amount of €████ (£████), which we have agreed to the underlying contract. Variations to the contract have been made relating to a change of the offshore installation start date, modifications to levelling tools and the design fabrication and delivery of one access platform and one crew basket landing platform. As such, the latest contract value amounts to €████ (£████), of which, we have agreed €████ (£████) to the original contract plus subsequent variation orders. No information has been provided to support the remaining €████ (£████) of costs and therefore we suggest that the CAT be decreased by this amount. We understand that the Developers have agreed to process this adjustment.
- 8.18 Further estimated costs of £████ are included in relation to further variation orders due to weather downtime and standby during offshore platform installation. We have agreed a total of €████ (£████) to option agreements for further works. The Developers are not able to provide support for the remaining £████, which relates to expected future variation and therefore we suggest that the CAT be decreased by this amount. We understand that the Developers have agreed to process this adjustment.

### Resources, travel and contingency costs

- 8.19 Information in relation to resources, travel and contingency costs, including our verification work, is set out in **Section 6**.

### Other contracts

- 8.20 Other contracts of £████ relate to minor contracts totalling £████ (with each being individually insignificant) and further estimated costs to complete of £████, as described below.

8.21 The Developers entered into minor contracts with the following suppliers totalling £[REDACTED] for offshore substation installation:

i. [REDACTED]

8.22 Further estimated costs of £[REDACTED] have been included within the CAT to cover the cost of future variation orders and off-shore testing. No further documentation has been provided to substantiate these remaining costs to complete. We therefore suggest that the CAT be reduced by £[REDACTED]. We understand that the Developers have agreed to process this adjustment.



- 9.3 For the supply of the export cable, six cable manufacturers were invited to tender and three tenders were received, of which all three were shortlisted:
- [REDACTED]
- 9.4 The tender evaluation documentation shows that the basis for recommendation was to identify the most economically advantageous compliant tender. Weighting of [REDACTED].
- 9.5 A recommendation was made to award the work to LS Cables after it achieved [REDACTED].
- 9.6 Further to the award of the tender, the Developers entered into a contract with LS Cable & Systems for the provision of offshore export cable supply for the amount of € [REDACTED] (£ [REDACTED]), which we have agreed to the underlying contract. We do not know the reason for the difference between the amount of the tender and the contract. Variations to the contract have been made, such that the latest expected amount payable under the contract totals € [REDACTED] (£ [REDACTED]). We have agreed costs in relation to this contract amounting to € [REDACTED] (£ [REDACTED]) to the original contract and subsequent variation orders. We suggest that the CAT be increased for these additional costs of € [REDACTED] (£ [REDACTED]). We understand that the Developers have agreed to process this adjustment.
- 9.7 The Developers have entered into a contract with VolkerInfra Limited for the provision of HDD works for the amount of £ [REDACTED], which we have agreed to the underlying contract. Variations to the contract have been made, such that the latest expected amount payable under this contract totals £ [REDACTED], of which, we have agreed £ [REDACTED] to the original contract plus subsequent variation orders. The additional costs we have been able to verify of £ [REDACTED] arise as a result of a subsequent variation order (038-03) having been excluded from the CAT. We suggest that the CAT be increased for these additional costs. We understand that the Developers have agreed to process this adjustment of £ [REDACTED].
- 9.8 The CAT also includes a negative balance of £ [REDACTED] which relates to further variation orders in relation to onshore civil works for final cable termination. We have not been provided with an explanation nor a breakdown of this negative figure, and in light of the additional costs identified above propose that it is removed. We understand that the Developers have agreed to adjust the CAT for a £408,576 increase.

### WMR Installation - Offshore Export Cable

- 9.9 The Developers have entered into one main contract in relation to the installation of submarine cable. We summarise and discuss this contract below:

Contractor	Original contract value		Current contract value		Amount agreed	
	€	£	€	£	€	£
████	████	████	████	████	████	████
████	████	████	████	████	████	████
████	████	████	████	████	████	████
████	████	████	████	████	████	████

- 9.10 There have been two tender processes for the offshore export cable installation contract. In the first tender process, Global Marine was selected as the preferred bidder. However, prior to signing, Global Marine identified it had a double commitment of the installation vessel and chose to withdraw its proposal. As a result a second tender process was launched because, since the negotiations with Global Marine were sustained over a long period of time, all previously received tenders had exceeded the tender validity date.
- 9.11 For the revised tender process for the supply of the offshore export cable installation, five companies were invited to tender and only two tenders were received, both being shortlisted:
- ██████.
- 9.12 The tender evaluation documentation shows that the basis for recommendation was to identify the most economically advantageous compliant tender. Weighting of ██████
- 9.13 A recommendation was made to award the work to VSMC after it achieved ██████.



- 9.14 Further to the award of the tender, the Developers have entered into a contract with Visser & Smit Marine for the provision of onshore substation transformer supply for the amount of € [REDACTED] (£ [REDACTED]), which we have agreed to the underlying contract. We do not know the reason for the difference between the amount of the tender and the contract. Variations to the contract have been made, such that the latest expected amount payable under the contract totals € [REDACTED] (£ [REDACTED]). We have agreed costs in relation to this contract amounting to € [REDACTED] (£ [REDACTED]) to the original contract and subsequent variations. The additional costs we have been able to verify of € [REDACTED] (£ [REDACTED]) are a result of subsequent variation orders from April to July 2014 (037-02 to 037-04) not having been included within the CAT. We understand that the Developers have agreed an increase of £ [REDACTED] to the CAT in respect of these additional variation orders.
- 9.15 Included within the CAT is £ [REDACTED] in relation to other contracts. The Developers entered into a contract with Peter Madsen Rederi A/S in respect of Boulder removal for € [REDACTED] (£ [REDACTED]). Further variation orders have been agreed, such that we have been able to verify a total cost of € [REDACTED] (£ [REDACTED]). The Developers also entered into six minor contracts for installation of submarine cable for a total of £ [REDACTED]. Each contract is individually insignificant and has, therefore, not been reviewed in detail. The total verified costs of other contracts are therefore £ [REDACTED], representing additional costs compared to the CAT of £ [REDACTED]. We therefore suggest that the CAT be increased by this amount. We understand that the Developers have agreed to process this adjustment.
- 9.16 The CAT includes remaining costs to complete of £ [REDACTED]<sup>23</sup> in respect of offshore export cable installation.
- 9.16.1 Estimated costs of [REDACTED] million DKK (£ [REDACTED]) were included in relation to the installation costs of the offshore export cable. This provision was for a potential further variation order for weather downtime and standby. [REDACTED] million DKK was provided for cable burial, [REDACTED] million DKK for cable pull to offshore substation and [REDACTED] million DKK for other potential variations.
- 9.16.2 Additional estimated costs of £ [REDACTED] were included within the CAT for the offshore export cable.

---

<sup>23</sup> Being £ [REDACTED]

9.16.3 The Developers have since proposed to reduce the CAT by £[REDACTED] in respect of remaining costs to complete that are no longer required.

9.16.4 The remaining amount of £[REDACTED]<sup>24</sup> relates to general expected variation orders of £[REDACTED] and a provision of €[REDACTED] million (£[REDACTED]) for variation orders relating to the second end burial works (weather down time and fuel costs). The Developers have been able to support £[REDACTED] with drafted but not yet executed variation orders. The remaining amount of £[REDACTED] remains unsubstantiated and therefore we suggest that the CAT be further reduced by this amount. As a result, we understand that the Developers have agreed to process a total reduction to the CAT of £[REDACTED]<sup>25</sup>.

**WMR Supply - Harwich & Carousel**

9.17 The Developers have entered into two main contracts in relation to spare cable and carousel supply. We summarise the contracts below and discuss each in turn:

Contractor	Original contract value		Current contract value		Amount agreed	
	€	£	€	£	€	£
[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]

9.18 The Developers have entered into a contract with L S Cable & Systems for the provision of spare cable and carousel supply for the amount of €[REDACTED] (£[REDACTED]), which we agreed to the underlying contract. However, the Developers (and Ofgem) have since confirmed that these costs should be allocated at 0% to the OFTO and therefore should be removed from the CAT. As such, we understand that a reduction to the cost of the Transmission Assets of £[REDACTED] is to be processed by the Developers.

<sup>24</sup> Being the total estimates to complete of £[REDACTED] less the Developers' adjustment of £[REDACTED]

<sup>25</sup> Being £[REDACTED] + £[REDACTED]

- 9.19 The Developers entered into a contract with Harwich Dock Company Limited for the provision of spare cable and carousel supply for the amount of £[REDACTED], which we were unable to agree to the underlying contract. However, the Developers (and Ofgem) have since confirmed that these costs should be allocated at 0% to the OFTO and therefore should be removed from the CAT. As such, we understand that a reduction to the cost of the Transmission Assets of £[REDACTED] is to be processed by the Developers.
- 9.20 The CAT includes a further £[REDACTED] of costs which we understand may relate to further variation orders in relation to spare cable and carousel supply. As noted above, these contracts should be removed from the CAT in their entirety, and as such, we understand that a reduction to the cost of the Transmission Assets of £[REDACTED] is to be processed by the Developers.

#### **Resources, travel and contingency costs**

- 9.21 Information in relation to resources, travel and contingency costs, including our verification work, is set out in **Section 6**.

#### **Other costs**

- 9.22 A total of £[REDACTED] has been included in the CAT relating to the costs of consents for offshore cable routing.



- 10.5 A recommendation was made to award the work to LS Cables after it achieved [REDACTED].
- 10.6 Further to the award of the tender, the Developers have entered into a contract with LS Cables & Systems for the supply of the land cable for the amount of £[REDACTED], which we have agreed to the underlying contract. The tender amount was varied to reflect potential changes in the design requirement, repeated cable testing, additional cable routing and a freighter to transport the cables to a UK port. We do not know why the tender amount is denominated in Euros and the contract in Sterling. Variations to the contract have been made, such that the latest expected amount payable under the contract totals £[REDACTED], of which we have agreed £[REDACTED] to the original contract plus subsequent variation. The additional costs we have been able to verify of £[REDACTED]<sup>26</sup> are as a result of subsequent variation orders from 10 September 2013 to 13 May 2014 (034-02 to 034-06) and contract amendment 034-01 having been excluded from the CAT. As such, we suggest that the CAT is increased by £[REDACTED] in respect of these additional variation orders and contract amendments. We understand that the Developers have agreed to process this adjustment.
- 10.7 The Developers have entered into minor contracts with three suppliers for a total of £[REDACTED]. We suggest that the CAT is increased by £[REDACTED] for these contracts. We understand that the Developers have agreed to process this adjustment.
- 10.8 The CAT includes a further £[REDACTED] of costs which we understand may relate to further variation orders in relation to onshore civil works for final cable termination. The Developers have since reduced these remaining costs to complete by £[REDACTED], and have informed us that they will adjust the CAT accordingly. The remaining costs to complete of £[REDACTED] relate to individually insignificant expected variation orders that have not yet been executed.

---

<sup>26</sup> Being £[REDACTED]

### WMR Installation - Onshore Export Cable

- 10.9 The Developers have entered into one main contract in relation to the installation of land cable. We summarise this contract below:

Contractor	Original contract value		Current contract value		Amount agreed	
	€	£	€	£	€	£
████		████		████		████
████		████		████		████
		████		████		████

- 10.10 The Developers have entered into a contract with J. Murphy & Sons Limited for the installation of the land cable for the amount of £████, which we have agreed to the underlying contract. Adjustments to the contract have been made, such that the latest expected amount payable under the contract totals £████, of which, we have agreed £████ to the original contract plus subsequent variation orders. The additional costs we have been able to verify of £████ are as a result of some of the large number of variation orders not having been included within the CAT. We therefore suggest that the CAT be increased by £████. We understand that the Developers have agreed to process this adjustment.
- 10.11 The CAT includes a further £████ of costs which we understand may relate to further variation orders in relation to onshore civil works for final cable termination. We have agreed £████ in relation to anticipated variation orders 035-13 and 035-20, which have not yet been executed. There are additional remaining costs to complete of £████, which relate to high voltage testing and security. We have therefore identified a total of £████ in relation to remaining costs to complete. We suggest that the CAT is increased for the additional costs identified of £████. We understand that the Developers have agreed to make this adjustment.

### Resources and travel and contingency costs

- 10.12 Information in relation to resources, travel and contingency costs, including our verification work, is set out in **Section 6**.

### Other costs

- 10.13 The Developers have included other costs of £████ which relate to a cost to complete of £████ in respect of leases to landowners along the cable route. A further £████ has been provided for crop loss compensation along the cable route. The Developers are unable to provide any supporting calculations for either of the figures. We therefore suggest that the CAT is decreased by £████ for these other costs and understand that the Developers have agreed.

# 11 ONSHORE SUBSTATION CONNECTION

11.1 The onshore substation connection costs are comprised as follows:

## CR 7 - Onshore substation connection costs

Contract overview	Ref	Currently projected costs £
<b>WMR Supply - HV/MV Onshore</b>		
█	█	█
█	█	█
█	█	█
█	█	█
█	█	█
█	█	█
		█
<b>WMR Supply - Onshore substation civil</b>		
█	█	█
█	█	█
		█
<b>WMR Onshore substation footprint - Consents</b>		
█	█	█
█	█	█
█	█	█
		█
█	█	█
█	█	█
█	█	█
█	█	█
		█

### WMR Supply - HV/MV Onshore

- 11.2 The Developers have entered into five main contracts in relation to HV/MV onshore supply. We summarise the contracts below and discuss each in turn:

Contractor	Original contract value		Current contract value		Amount agreed	
	€	£	€	£	€	£
████	████	████	████	████	████	████
████	████	████	████	████	████	████
████	████	████	████	████	████	████
████	████	████	████	████	████	████
████	████	████	████	████	████	████
████	████	████	████	████	████	████
		████		████		████

- 11.3 The Developers have entered into a contract with ABB Switzerland Limited for the provision of onshore substation SVC supply for the amount of €████ (£████), which we have agreed to the underlying contract. We have not seen the tender documentation in relation to this contract. Variations to the contract have been made, such that the latest expected amount of the contract totals €████ (£████), of which, we have agreed €████ (£████) to the original contract plus subsequent variation orders. No information has been provided to support the remaining costs of €████ (£████) and therefore we suggest that the CAT is decreased by this amount. We understand that the Developers have agreed this adjustment.
- 11.4 The Developers have entered into a contract with CG Electric Systems for the provision of onshore substation transformer supply for the amount of €████ (£████), which we have agreed to the underlying contract. Variations to the contract have been made, such that the latest expected amount of the contract totals €████ (£████), which we have agreed in its entirety to the original contract plus subsequent variation orders.
- 11.5 The Developers have entered into a contract with NGET for the provision of the onshore substation switch-gear supply for the amount of £████, which we have agreed to the underlying contract. No subsequent variation orders have been made.



- 11.6 The Developers have entered into a contract with Alstom Grid Denmark for the provision of 170kV GIS switchgear supply for the amount of € [REDACTED] (£ [REDACTED]), which we have agreed to the underlying contract. Variations to the contract have been made, such that the latest expected amount of the contract totals € [REDACTED] (£ [REDACTED]), of which, we have agreed € [REDACTED] (£ [REDACTED]) to the original contract plus subsequent variation orders. The additional costs we have been able to verify of € [REDACTED] (£ [REDACTED]) are as a result of a variation order (025-04 dated 8 January 2014) not being included within the CAT. The amount is less than £100,000 and therefore we have not proposed any adjustment.
- 11.7 The Developers entered into a contract with Alstom Grid UK Limited for the provision of harmonic fitters supply for the amount of £ [REDACTED], which we have agreed to the underlying contract. Variations to the contract have been made, such that the latest expected amount of the contract totals £ [REDACTED], of which, we have agreed £ [REDACTED] to the original contract plus subsequent variation orders. No information has been provided to support the remaining costs of £ [REDACTED]<sup>27</sup> and therefore we suggest the CAT is decreased by this amount. We understand that this adjustment has been agreed by the Developers.
- 11.8 The CAT includes a further £ [REDACTED] of costs which we understand may relate to further variation orders in relation to in relation to HV/MV Onshore supply. The Developers have provided a list of expected variation orders, each of individually insignificant amounts, which total more than the remaining costs to complete. No upward adjustment has been proposed out of prudence, given the variation orders have not yet been executed.

### WMR Supply - Onshore substation civil

- 11.9 The Developers have entered into one main contract in relation to onshore civil works. We summarise and discuss the contract below:

Contractor	Original contract value		Current contract value		Amount agreed	
	€	£	€	£	€	£
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]
		[REDACTED]		[REDACTED]		[REDACTED]

<sup>27</sup> Unsupported costs actually amount to £ [REDACTED]. However, agreed costs of £ [REDACTED], have been presented in Appendix 1, resulting in an adjustment of £ [REDACTED] being processed by the Developers. As the difference of £ [REDACTED] is insufficient we do not propose raising another adjustment.

11.10 The Developers entered into a contract for Balfour Beatty Limited to provide onshore civil works for the amount of £[REDACTED], which we have agreed to the underlying contract. Variations to the contract have been made, such that the latest expected amount of the contract totals £[REDACTED], of which we have agreed £[REDACTED] to the original contract plus subsequent variation orders. Although we note the Developers' explanation that there are anticipated future variation orders in respect of this contract, no information has been provided to support the remaining costs of £[REDACTED]. As such, we propose a decrease to the CAT of this amount. We understand that the Developers have agreed to process this adjustment.

11.11 The CAT includes a further £[REDACTED] of costs which we understand may relate to further variation orders in relation to onshore civil works. This is below £100,000 therefore no further explanations have been sought.

### WMR Onshore substation footprint - Consents

11.12 The Developers entered into two subleases with AK Negri & Newsam in respect of consents. We summarise and discuss the contract below:

Contractor	Current contract value	Amount agreed
	£	£
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

11.13 As set out in the table above, the cost included within the CAT is £[REDACTED]. However, the two subleases with AK Negri & Newsam give a total rent payable of £[REDACTED] per annum, for 25 years. This would imply a total cost of £[REDACTED], which is far in excess of the total amount included within the CAT. The Developers have not been able to provide an explanation for how the rental figure ties in with that included within the CAT. However, as there is a contract supporting a higher amount than included within the CAT and there are unsubstantiated estimates to complete, as set out in paragraph 11.15, we do not propose any adjustment.

11.14 Also included within consents is a minor lease agreement with Ferndale Transport Co. (Hull) Limited for the amount of £[REDACTED].

11.15 The CAT includes estimates to complete in relation to consents costs totalling £[REDACTED], which includes £[REDACTED] in relation to individually insignificant leases and £[REDACTED] in relation to the lease and sublease of that above. Given the large total cost implied by the term and the annual rental as per paragraph 11.13, we have taken the view that the total remaining costs to complete have been substantiated.

### **Resources, travel and contingency costs**

11.16 Information in relation to resources, travel and contingency costs, including our verification work, is set out in **Section 6**.

### **Other contracts**

11.17 The CAT includes £[REDACTED]<sup>28</sup> of costs in relation to other contracts. These are discussed in further detail below.

11.17.1 The Developers entered into a contract with Kelvin Energy for installation activities for the amount of £[REDACTED] and a further contract for civil works for the amount of £[REDACTED]. The total of the two contracts being £[REDACTED]. We have agreed £[REDACTED] to contracts in place with Kelvin Energy, with an amount of £[REDACTED] remaining unsubstantiated. The Developers are unable to provide any further documentation to support the total amount, and we therefore suggest that the CAT is adjusted for this (see paragraph 11.18).

11.17.2 Individually insignificant contracts totalling £[REDACTED] in relation to LV & Utility Onshore supply have been agreed to a breakdown. The Developers have informed us they are to make a reduction to the CAT of £[REDACTED] in respect of remaining costs to complete that are no longer required.

11.17.3 Individually insignificant contracts totalling £[REDACTED] in relation to HV/MV Onshore Installation have been agreed to a breakdown.

11.17.4 Remaining costs to complete of £[REDACTED] have been included in the CAT, with no supporting documentation. We therefore suggest that the CAT is reduced by this amount (see paragraph 11.18).

---

<sup>28</sup> Being £[REDACTED]

11.18 In total, £[REDACTED]<sup>29</sup> of other contracts have been agreed to supporting documentation, or are individually insignificant. The remaining £[REDACTED] comprises an adjustment of £[REDACTED] made by the Developers and unsubstantiated costs of £[REDACTED]<sup>30</sup>. We therefore suggest a further decrease to the CAT for the £[REDACTED]. We understand that the Developers have agreed to process this adjustment, so that other contracts are decreased by the full £[REDACTED].

---

<sup>29</sup> Being £[REDACTED]

<sup>30</sup> Being £[REDACTED]

## 12 ISSUES ARISING

12.1 We set out in this section adjustments which we understand the Developers have agreed to make to the CAT, detail of the issues which have arisen during the Ex-Ante Review and the resulting impact on the cost assessment.

### ADJUSTMENTS TO THE CAT

12.2 We have noted in individual paragraphs, as set out in **Sections 6 to 11**, where we have been unable to verify certain costs or the Developers have proposed increases/decreases to the CAT and therefore the Developers have agreed to process adjustments to the CAT. These adjustments total £13,711,437. Details of individuals amounts are set out in **Appendix 1**.

### OVERHEAD ALLOCATION RATES

12.3 As set out at paragraphs 5.34 to 5.36, the CAT includes a number of costs which have been allocated to the Transmission Assets at a rate of 25%, based upon the costs which are directly attributable to the Transmission Assets as a percentage of all Wind Farm costs which are directly attributable to the Transmission Assets and the generation assets.

12.4 We consider this approach to be an acceptable method of cost allocation, and consistent with approaches adopted on other wind farm projects.

12.5 However, based upon current information, along with the adjustments we understand the Developers are to process, the percentage of costs directly attributable to the Transmission Assets has fallen from 25% (to approximately 23%). We understand that the Developers will establish a new allocation rate once all other areas of the cost assessment for the ITV phase have been agreed. We therefore do not propose any adjustment but a reduction to project common costs is likely to be required when the new rate has been established.

12.6 We understand that the Developers are to review the methodology for the allocation of common costs once all other areas have been agreed, and as such, the extent to which such expenditure is included within the CAT likely to have changed by the time of the Ex-Post Review.

### AREAS REQUIRING TECHNICAL INPUT

12.7 As detailed at paragraphs 6.3 to 6.11, the CAT for the Transmission Assets includes £ [REDACTED] relating to the Developers' internal staff costs spent in managing the project and in the construction of the Transmission Assets.

- 12.8 The Developers have provided us with detailed schedules which show the number of hours spent and forecasted hours by each individual and activity during the construction of the Wind Farm. However, it is outside our area of expertise to establish whether the time spent by the Developers' own staff is reasonable.
- 12.9 Included within these schedules are average hourly rates for people involved in the Wind Farm development. However, it is outside our area of expertise to establish whether the hourly rate is reasonable.
- 12.10 On this basis, we recommend that Ofgem should instruct its technical advisors to review these schedules in order to determine whether these costs are being efficiently incurred.
- 12.11 Separately, as detailed at paragraphs 6.16 to 6.33, the contingency provision for the Transmission Assets has been calculated based upon the Developers' assessment of the risks associated with the construction of the Transmission Assets. However, it is outside our area of expertise to establish whether the Developers' assessment of the expected value of risks and of the likelihood of each event occurring are correct.
- 12.12 On this basis, if Ofgem requires more comfort in this area, we would recommend that it should instruct its technical advisors to review the risk schedule in order to determine whether the Developers' assessments are reasonable.
- 12.13 Finally, as set out at paragraph 7.22, the Developers have allocated electrical DEVEX at [REDACTED] %, a higher rate than for other categories. Ofgem may wish to work with its technical advisors to consider whether such a sub-separation is appropriate and if so, whether this percentage reflects what would be expected.

### **CALCULATION OF HOURLY RATES**

- 12.14 The hourly rates which are used by the Developers to charge the time which people spend on the Wind Farm include a profit element, which the Developers state is included in all cross entity activities to ensure compliance with transfer pricing requirements, as detailed at paragraphs 6.5 to 6.7.
- 12.15 We understand that the Developers are required to sell the Transmission Assets to the OFTO at cost. As such, the inclusion of profit within the hourly rates is inconsistent with this.



■	■	■
■	■	■
Total adjustments to be processed by the Developers		(13,711,437)
<b>Revised cost of Transmission Assets</b>		<b>178,695,860</b>

12.18 However, a reduction in the capital value of Transmission Assets may be required in relation to;

- i a reduction in the percentage costs directly attributable to the Transmission Assets ie the allocation rate of project common costs
- ii the inclusion of profit in hourly rates, we are unable to quantify the extent of this adjustment at this stage, as we do not have details of what element of profit is included in the hourly rate at this time.





**[www.grant-thornton.co.uk](http://www.grant-thornton.co.uk)**

© 2016 Grant Thornton UK LLP. All rights reserved.

"Grant Thornton" means Grant Thornton UK LLP, a limited liability partnership.

Grant Thornton UK LLP is a member firm within Grant Thornton International Ltd ('Grant Thornton International'). Grant Thornton International and the member firms are not a worldwide partnership. Services are delivered by the member firms independently.