



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

Report of Grant Thornton UK LLP dated 29 January 2016

CONTENTS

1	Executive Summary	1
2	Introduction	6
3	The Westermost Rough ex post review	9

APPENDICES

1	Invoice testing
2	STX France invoice review
3	Visser & Smit invoice review
4	LS Cable & System invoice review
5	Seaway Heavy Lifting invoice review
6	Balfour Beatty invoice review
7	Indirect costs review
8	Movements between the cost templates

1 EXECUTIVE SUMMARY

- 1.1 Grant Thornton UK LLP (Grant Thornton) has been instructed by the Office of Gas and Electricity Markets (Ofgem) to carry out a review (in accordance with our instructions set out below) of the ex post cost information prepared by DONG Energy A/S (DONG), for the transmission assets (the Transmission Assets) of the Westermost Rough Wind Farm (the Wind Farm), as set out in further detail at paragraphs 2.7.
- 1.2 The Wind Farm is owned by Westermost Rough Limited (WMR Ltd), a special purpose vehicle (SPV) ultimately jointly owned by DONG (50%), Marubeni Corporation (25%) (Marubeni) and UK Green Investment Bank plc (25%) (GIB) (collectively the Developers). The WMR project is managed by DONG under a Construction Management Agreement.
- 1.3 The review has sought to determine whether the Developers have procedures in place for managing directly and indirectly incurred costs, and to carry out certain testing on whether the Developers' latest assessment of the costs of the Transmission Assets recorded in the cost assessment template (CAT) provided to Ofgem on 21 April 2015 (the 21 April 2015 CAT) have been incurred as stated. Further detail of our work is set out in **Section 3**, supplemented in **Appendices 1 to 8**, and is summarised as follows:
- establish the processes and policies undertaken by the Wind Farm for making payments for directly and indirectly incurred costs;
 - in relation to directly incurred costs, for selected contracts trace expenditure through the purchasing and payments system and reconcile the costs included on the invoice schedule to the 21 April 2015 CAT;
 - in relation to indirectly incurred costs, for a sample of transactions, trace expenditure through the accounting system, and confirm the amount allocated has been correctly applied in accordance with the stated allocation methodology, using appropriate metrics in respect of the allocation of costs between transmission and generation; and
 - compare the costs at 21 April 2015 to the Indicative Transfer Value at November 2014, and obtain explanations for significant variances arising between the two dates.
- 1.4 This reports reflects the 21 April 2015 CAT together with information and explanations received by Grant Thornton up to and including 26 June 2015. Our report does not therefore reflect any information or the outcome of discussions held after that date.

- 1.5 DONG has prepared cost templates setting out its assessment of the costs of the Transmission Assets throughout the development of the Wind Farm project. We reviewed earlier versions of cost templates submitted between 31 July 2013 and 7 April 2014 (the ex ante review) which culminated in the submission of our draft report on 7 October 2014. Our report was considered by Ofgem in establishing the project's Indicative Transfer Value set in November 2014¹.
- 1.6 DONG has submitted the 21 April 2015 CAT to Ofgem setting out its current assessment of the costs incurred in the development of the Wind Farm's Transmission Assets and it is this cost template that has been used in our work. The 21 April 2015 CAT is summarised below:

Breakdown of Transmission Assets costs

	November 2014 Indicative Transfer Value	21 April 2015 CAT £	Movement £
CR2 - Project common costs	■	■	■
CR3 - Offshore substation	■	■	■
CR4 - Submarine cable supply and installation	■	■	■
CR5 - Land cable supply and installation	■	■	■
CR7 - Onshore substation connection	■	■	■
CR10 - General development costs	■	■	■
Total capital costs	■	■	■
Financing costs, transactions costs and interest during construction	■	■	■
	172,295,860	168,851,433	(3,444,427)

- 1.7 The 21 April 2015 CAT reflects a decrease in the cost of the Transmission Assets of £3.4 million from the November 2014 Indicative Transfer Value. The reasons for the decrease between cost assessments are set out in more detail at paragraph 3.28 and **Appendix 8**, with the principal reasons being the release of contingencies as costs became known and the redistribution of costs, particularly between project common costs, offshore substation and onshore substation connection. The full analysis of the variances above is presented at **Appendix 8**.

SUMMARY OF FINDINGS

The Wind Farm's payment processes

- 1.8 We were instructed by Ofgem to establish the Wind Farm's processes for making payments to suppliers for directly and indirectly incurred costs.

¹ Letter from Ofgem to DONG dated 11 November 2014 "Indicative Transfer Value for the Westermost Rough (WMR) project"

1.9 DONG has confirmed that all large value contracts for the Wind Farm have been subject to a competitive tendering process. Based upon our review it appears DONG has suitable systems in place for the approval and payments of invoices to contractors, including contract variations, and has further systems in place to ensure that, where appropriate, the allocation of costs between the Transmission and Generation Assets is properly recorded.

Directly incurred costs

1.10 We were instructed by Ofgem to carry out certain procedures (as detailed at paragraph 3.16) on the costs payable by the Wind Farm to STX France for the supply of the offshore platform; Seaway Heavy Lifting for the installation of the offshore platform; LS Cable & Systems for the supply of the offshore, export and spare cable; Visser & Smit Marine for the installation of the offshore cable and Balfour Beatty for the provision of onshore civil works.

1.11 These five contracts amounted to £ [REDACTED] million and represent [REDACTED] %² of the overall capital cost excluding interest during construction. These procedures have been carried out as required and a summary of our findings is set out below:

Summary of direct costs testing

	Invoices paid £	Accrued amounts £	Currency exchange impact £	Total per 21 April 2015 CAT £
STX France	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Visser & Smit	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
LS Cable & System	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Seaway Heavy Lifting	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Balfour Beatty	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

1.12 We have checked that 98.1% of the amounts due to the contractors have been paid.

1.13 Accrued amounts represent firm amounts where invoices have been received but which are still to be paid.

² [REDACTED]

- 1.14 We have checked the basis for calculation of the accrued amounts and consider that these amounts have been determined appropriately based upon the underlying evidence that we have seen.
- 1.15 An amount of € [REDACTED] in relation to a claim against the contractor [REDACTED] has not been included within the 21 April 2015 CAT as at the date of its preparation the payment had not been received by WMR Ltd and was under investigation. However we understand that this was expected to be paid. We propose therefore that the cost of the Transmission Assets be reduced by this amount.

Indirectly incurred costs

- 1.16 We were instructed by Ofgem to carry out certain procedures (as detailed in paragraph 3.23) in relation to the following costs payable by the Wind Farm:

Summary of indirectly incurred costs selected for testing

	September 2014 cost DKK	September 2014 cost £	Agreed to invoice	Agreed to ledger	Agreement to bank
NAMES REDACTED	[REDACTED]	[REDACTED]	✓	✓	✓
	[REDACTED]	[REDACTED]	✓	✓	✓
	[REDACTED]	[REDACTED]	✓	✓	✓
	[REDACTED]	[REDACTED]	✓	✓	✓
	[REDACTED]	[REDACTED]	✓	✓	✓
	[REDACTED]	[REDACTED]			

- 1.17 Our work in relation to these costs is summarised below.

Project management support services costs

- 1.18 We have been provided with a breakdown of project management support services costs, and carried out a test of these costs to underlying records. Costs incurred to date have been allocated to the Transmission Assets based upon the time spent between the transmission and generation businesses by DONG's staff and the external contractors who have worked on the Wind Farm development.
- 1.19 Estimated time costs have been allocated to the Transmission Assets based upon the time spent by employees and contractors on activities relating to the Transmission Assets as a proportion of total employees and contractors time on the Wind Farm project as a whole, with monthly rates used based upon timesheet records. This allocation methodology is in line with that employed on similar projects.

CONCLUSIONS

- 1.20 Our review of the Wind Farm's processes and procedures has indicated that it has policies for the approval and payment of goods and services received, including for the allocation of costs where appropriate between the Transmission and Generation Assets.
- 1.21 On the basis of our review of the information and explanations received to date in relation to the sample of directly and indirectly incurred costs that we have been asked to review, we can confirm that they are supported by invoices, ledgers and bank statements that indicate that they have been incurred or are due and that the relevant cost is included within the 21 April 2015 CAT, subject to the cost of the Transmission Assets being reduced by [REDACTED] for the contractor claim against [REDACTED].

Grant Thornton UK LLP

London

29 January 2016

2 INTRODUCTION

INSTRUCTIONS

- 2.1 Grant Thornton has been instructed by Ofgem, to prepare a report on our review of the cost information and 21 April 2015 CAT for the Transmission Assets of the Wind Farm, prepared for Ofgem by DONG (the ex post review). This review is limited to the procedures set out in more detail in **Section 3**, and in particular to a sample of costs which have been selected by Ofgem.
- 2.2 Throughout the development of the Wind Farm, Ofgem has required the Developers to submit cost templates which set out both the estimated and actual costs that will be or have been incurred in relation to the Transmission Assets.
- 2.3 In April 2014 we conducted reviews of cost templates for the Transmission Assets prepared between 31 July 2013 and 7 April 2014 (the ex ante review). At this stage construction of the Transmission Assets had begun, however there remained a degree of uncertainty over a number of costs. As such, the Indicative Transfer Value included a contingency provision of £ [REDACTED] which equated to [REDACTED] %³ of the Transmission Asset costs.
- 2.4 Further to the ex ante review, Ofgem set the Indicative Transfer Value for the Transmission Assets in November 2014. This was based upon the Transmission Assets costs included in our draft report, and adjusted for particular issues that had been highlighted in our draft report as follows:

Reconciliation of ex ante report to Indicative Transfer Value

	7 October 2015 Grant Thornton draft report £	Reallocations £	Grant Thornton adjustments ex ante £	Ofgem adjustments ex ante £	November 2014 Indicative Transfer Value £
CR2 - Project common costs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CR3 - Offshore substation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CR4 - Submarine cable supply and installation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CR5 - Land cable supply and installation	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CR7 - Onshore substation connection	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
CR10 - General development costs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total capital costs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Financing costs, transactions costs and interest during construction	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	192,407,296	(0)	(14,170,786)	(5,940,651)	172,295,860

³ [REDACTED]

- 2.5 This reports reflects the 21 April 2015 CAT together with information and explanations received by Grant Thornton up to and including 26 June 2015. Our report does not therefore reflect any information or the outcome of discussions held after that date.
- 2.6 As at 26 June 2015, the development work on the Transmission Assets is largely complete with the Wind Farm expected to become fully operational by the end of 2015.
- 2.7 The main purpose of the ex post review of the Wind Farm's Transmission Assets is to determine whether a sample of items, selected by Ofgem, which have been included within the 21 April 2015 CAT prepared by DONG for the Transmission Assets are appropriately stated, and whether selected costs not directly attributable to either the generation or transmission businesses have been allocated to the Transmission Assets on a reasonable basis. In particular we have been asked to:
- establish the processes and policies undertaken by DONG for making payments to suppliers for directly and indirectly incurred costs;
 - in relation to directly incurred costs, for selected contracts trace expenditure from the cash flow schedule to the contract, invoice, the accounting ledgers of the Wind Farm, and to bank statements, and reconcile the costs included on the invoice schedule to the 21 April 2015 CAT;
 - in relation to indirectly incurred costs, for a sample of transactions trace from the 21 April 2015 CAT to journal entries made on the accounting system, and confirm the amount allocated has been determined as prescribed in the cost allocation methodology that DONG has indicated, using appropriate metrics in respect of the allocation of costs between transmission and generation; and
 - compare the costs at April 2015 to the Indicative Transfer Value at November 2014 and obtain explanations for variances between the two dates.
- 2.8 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.
- 2.9 This work does not constitute an audit performed in accordance with Auditing Standards.
- 2.10 Except to the extent set out in this report, we have relied upon the documents and information provided to us as being accurate and genuine. To the extent that any statements we have relied upon are not established as accurate, it may be necessary to review our conclusions.

- 2.11 The report has been prepared using Microsoft Word and Microsoft Excel. The report may contain minor rounding adjustments due to the use of computers for preparing certain calculations.

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 (i) Ofgem is fully entitled to disclose such information to us for inclusion within our report, free of any third party rights or obligations and (ii) 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 the material should be addressed to Ofgem. Accordingly, Grant Thornton acknowledge no duty or obligation whatsoever 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 the Wind Farm development that would in any way impact upon our independence in preparing this report.

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.

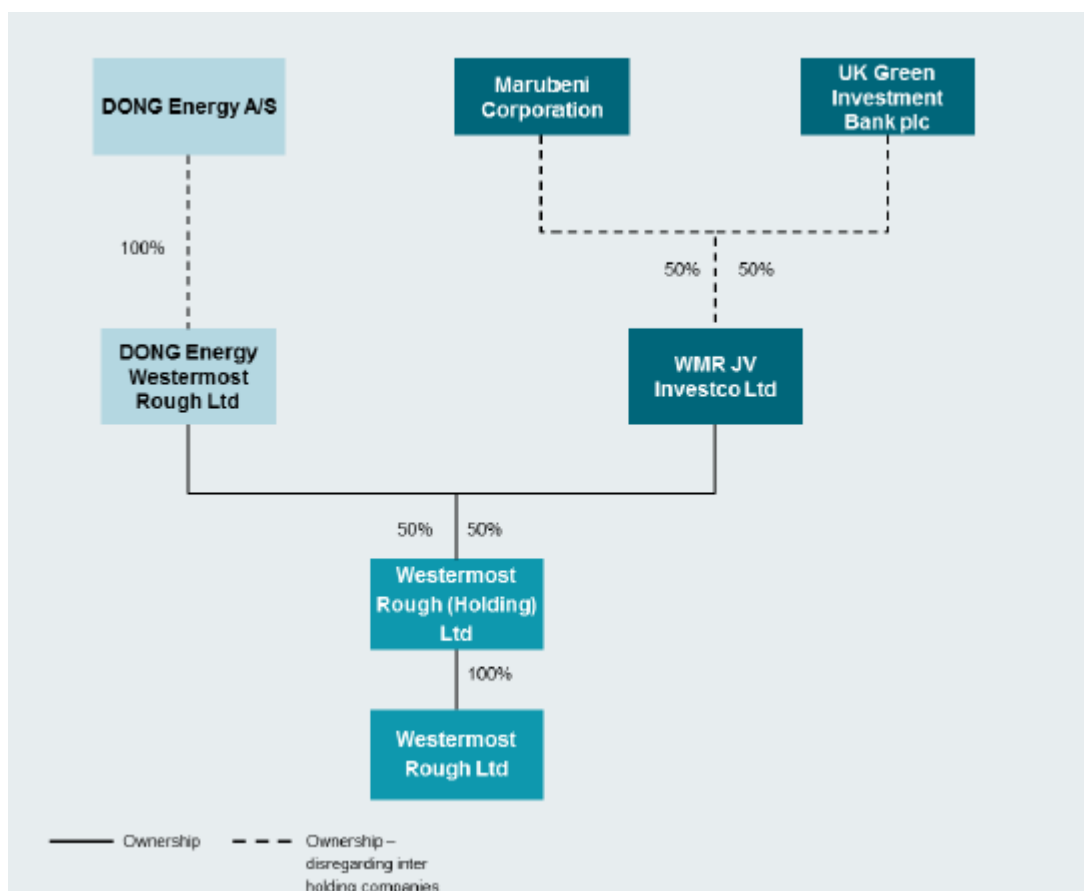
3 THE WESTERMOST ROUGH EX POST REVIEW

INTRODUCTION

- 3.1 WMR is situated in the North Sea, approximately eight kilometres off the Holderness coast of Yorkshire, and is located entirely within UK territorial waters. National Grid Electricity Transmission plc (NGET) is the onshore transmission licensee, and the Transmission Assets will connect to the 275kV NGET substation at Hedon, near Hull, in Yorkshire.
- 3.2 The Wind Farm will be the first commercial UK wind farm to utilise 6MW wind turbine generators (WTGs) and will consist of 35 Siemens 6MW WTGs with an installed capacity of 210MW (205MW at the Offshore Boundary Point)⁴, which will be connected to an offshore substation platform located within the boundaries of the Wind Farm.
- 3.3 The Wind Farm is owned by WMR Ltd, a SPV ultimately jointly-owned by DONG (50%), Marubeni (25%) and GIB (25%). The consortium will construct the WMR project managed by DONG under a Construction Management Agreement.
- 3.4 DONG confirmed that the ownership structure of the Wind Farm, as set out below⁵, has remained unchanged since our ex ante report:

⁴ The difference between installed and connected capacity is attributed to array cable losses.

⁵ Information Memorandum, dated 14 April 2014, page 10



INFORMATION PROVIDED

3.5 Grant Thornton has relied upon the following information in reviewing the cost assessment for the Wind Farm's Transmission Assets:

- the 21 April 2015 CAT, which includes actual costs incurred up to January 2015 and accrued costs that will be incurred from that date up to completion of the Wind Farm development, together with a list of reconciling items between the cost template at April 2014 to the Indicative Transfer Value of November 2014 (as detailed at paragraph 2.4 above);
- schedules of invoices prepared for the contracts selected for review by Ofgem, together with copies of invoices, bank statements and ledgers showing payments of the invoices recorded;
- schedules providing supporting information for the internal project management costs; and
- information and explanations provided to us by DONG. This included a visit to DONG's offices on 30 April 2015 to discuss the Transmission Assets, and subsequent telephone calls and email correspondence with DONG's staff responsible for the preparation of the 21 April 2015 CAT.

EX POST REVIEW

- 3.6 The main purpose of the ex post review is as set out in Section 2.
- 3.7 The 21 April 2015 CAT for the Transmission Assets of the Wind Farm is summarised below:

Breakdown of Transmission Assets costs

	November 2014 Indicative Transfer Value	21 April 2015 CAT £	Movement £
CR2 - Project common costs			
CR3 - Offshore substation			
CR4 - Submarine cable supply and installation			
CR5 - Land cable supply and installation			
CR7 - Onshore substation connection			
CR10 - General development costs			
Total capital costs			
Financing costs, transactions costs and interest during construction			
	172,295,860	168,851,433	(3,444,427)

THE WIND FARM'S FINANCIAL PROCESSES

Accounting systems

- 3.8 DONG confirmed that there have been no changes in its accounting system since our ex ante review.
- 3.9 All costs of the Wind Farm are posted to a Work Breakdown Structure (WBS) code in the accounting system. There are 253 WBS codes⁶ 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).
- 3.10 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 e.g. procurement, cost control, health and safety;
 - general consultants e.g. legal/environment and consent;
 - offices – London, Copenhagen and on site; and
 - SCADA equipment benefiting both the Transmission and Generation Assets.

⁶ Cost Allocation Methodology note dated 17 April 2014

- 3.11 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 were directly attributable to the Transmission Assets CAPEX as a share of the 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.
- 3.12 Within the 21 April 2015 CAT, the portion of shared costs that are directly attributable to the Transmission Assets has been set to [REDACTED]%. This has been calculated using the same method as described in paragraph 3.11, based on the actual CAPEX figures.

Process for making payments

- 3.13 The main process used by DONG for making payments for both directly and indirectly incurred costs is set out below:
- as identified in our draft ex ante cost review dated 7 October 2014, one of the tools used by the Wind Farm in achieving value for money is the use of a competitive tendering process which was reviewed in that report.
 - once the contract has been signed, a purchase order is set up by either the Package Manager or the Contract Manager.
 - when a contract milestone has been met, the contractor sends a payment certificate for approval by the Contract Manager.
 - after the payment certificate has been approved, the contractor submits an invoice.
 - the invoice is scanned and sent to the SAP co-ordinator who sends the invoice to the purchase order raiser, the first approver.
 - after first approval has been completed, the invoice is sent automatically by SAP to the second approver.
 - the approval thresholds for contracts and invoices are as follows:
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
 - if, at either stage, the invoice has not been approved SAP will send automatic reminders to the approvers. Additionally, the SAP co-ordinator performs manual checks of the status in workflow.

- once the invoice has received second stage approval, it is released for payment to the payment department. Any invoices not raised in UK sterling, are translated at the spot rate on the day that they are released for payment for the purposes of recording the costs in SAP.
- the payment terms are inputted into SAP by the SAP co-ordinator when the invoice is received and this drives the date on which the payment is made. No further approvals are required at this stage, as approval of the invoice is deemed to be approval of the payment. However, even if an invoice has been approved, the payment can be stopped if required. Any invoices not raised in UK sterling, will be paid on the spot rate on the date of payment and therefore this is likely to differ from the amount per SAP which was calculated on the day of release.

Contract variations

- 3.14 DONG has confirmed that the process for payment of contract variations is the same to the general invoice system set out above.

REVIEW OF DIRECTLY INCURRED COSTS

- 3.15 Ofgem has selected the following five contracts of directly incurred costs for review:

Summary of directly incurred costs selected for testing

	21 April 2015 CAT £	% of total Transmission Asset capital costs
STX France		
Visser & Smit		
LS Cable & System		
Seaway Heavy Lifting		
Balfour Beatty		

- 3.16 Ofgem has directed that our work in relation to these contracts covers the following:

- trace expenditure from the cash flow schedule to the relevant contract or other source record, and from the contract trace to an invoice(s) or journal;
- trace the invoice through the purchasing system;
- trace the invoice through to the payment system; and
- trace the payments through to the bank account.

3.17 Our detailed testing in relation to these contracts is set out in **Appendices 1 to 6**, and our findings are summarised in the following table:

Summary of direct costs testing

	Invoices paid £	Accrued amounts £	Currency exchange impact £	Total per 21 April 2015 CAT £
STX France				
Visser & Smit				
LS Cable & System				
Seaway Heavy Lifting				
Balfour Beatty				
Total				

Invoices paid

3.18 Our review of invoices paid by DONG that relate to the five Ofgem selected contracts selected raised no areas of concern.

Accrued amounts

3.19 Our review of accrued amounts in relation to the LS Cable & Systems contract raised no areas of concern.

Foreign currency impact

3.20 WMR has hedging agreements in place with its shareholders in which foreign exchange is hedged up front. The total foreign exchange costs included within the 21 April 2015 CAT are [REDACTED].

3.21 Included on the STX France contract within the 21 April 2015 CAT is [REDACTED] for the impact of foreign currency exchange. This amount should have been recognised under "Other costs" in addition to the amount mentioned above in paragraph 3.20. As a result there is no overall impact on the value of the Transmission Assets since this is only a difference in cost category within the 21 April 2015 CAT and as such no adjustment has been proposed in respect of this.

Contractor claim

3.22 A claim of ██████ was due from ██████ for works damages whilst ██████. The amount was due to be paid on 19 April 2015, however the funds had not been received in the bank, and consequently the missing payment was under investigation at the date of the cost template. It has therefore not been included within the 21 April 2015 CAT but is understood to be due and as such we would propose to deduct it from the cost of Transmission Assets.

REVIEW OF INDIRECTLY INCURRED COSTS

Project management costs

3.23 Ofgem has directed that our work in relation to project management costs covers the following:

- select a sample of employees;
- agree costs from each individuals timesheet to the system; and
- agree corresponding payment from the project.

3.24 Our findings are summarised in the following table:

Summary of indirect costs testing

	September 2014 cost DKK	September 2014 cost £	Agreed to invoice	Agreed to ledger	Agreement to bank
NAMES REDACTED	██████	██████	✓	✓	✓
	██████	██████	✓	✓	✓
	██████	██████	✓	✓	✓
	██████	██████	✓	✓	✓
	██████	██████	✓	✓	✓
	██████	██████			

3.25 Our testing of project management support services costs has identified no areas of concern.

3.26 For the avoidance of doubt, we have not verified the suitability of the hourly rates charged to the project by DONG.

MOVEMENTS IN THE COST ASSESSMENT

3.27 The movements between the Indicative Transfer Value set in November 2014 and the most recent cost assessment of April 2015 are summarised in the following table:

Breakdown of Transmission Assets costs

	November 2014 Indicative Transfer Value	21 April 2015 CAT £	Movement £
CR2 - Project common costs			
CR3 - Offshore substation			
CR4 - Submarine cable supply and installation			
CR5 - Land cable supply and installation			
CR7 - Onshore substation connection			
CR10 - General development costs			
Total capital costs			
Financing costs, transactions costs and interest during construction			

3.28 The principal reasons for the decrease in costs between the November 2014 Indicative Transfer Value and the 21 April 2015 CAT are the release of contingencies as costs became known and redistribution of costs between categories, particularly project common costs, offshore substation and onshore substation connection. However, when determining the Indicative Transfer Value, Ofgem proposed two adjustments, totalling £ [REDACTED] million, as identified in paragraphs 8.21 and 8.26 of Appendix 8. This reduced the Indicative Transfer Value to the figures shown above in November 2014, however these adjustments were not reflected in the 21 April 2015 CAT. Had DONG included these two adjustments in the 21 April 2015 CAT, the fall in costs between November 2014 Indicative Transfer Value and the 21 April 2015 CAT would have been greater.

3.29 The full variance analysis of the above variances is presented at **Appendix 8**.

IMPACT OF COST ASSESSMENT REVIEW

3.30 Following our review of the 21 April 2015 CAT, as detailed above, we consider that, other than to reduce the Transmission Asset costs by [REDACTED] for the contractor claim [REDACTED], there are no further amendments to be made to the cost template.

1 INVOICE TESTING

STX FRANCE

- 1.1 The 21 April 2015 CAT includes an amount of [REDACTED] which was due to STX France for work carried out in respect of the supply of the offshore substation platform which is made up as follows:

	€
Invoiced amounts	[REDACTED]
Exchange rate (€:£)	[REDACTED]
Total invoiced amounts (£)	[REDACTED]
Currency impact (£)	[REDACTED]
Total (£)	[REDACTED]
Total STX France costs per 21 April 2015 CAT (£)	[REDACTED]
	-

Review of amounts paid

- 1.2 We obtained a schedule of all invoices received under the STX France contact which recorded 14 purchase invoices. This is included at **Appendix 2**.

Vouching to invoices

- 1.3 We agreed all 14 invoices recorded on the schedule to the underlying invoice.

Vouching to purchase ledger

- 1.4 We agreed all 14 invoices to the purchase ledger.

Vouching to bank statements

- 1.5 We agreed the payment of all 14 invoices to bank statements.

Foreign exchange impact

- 1.6 Foreign exchange impact totals £[REDACTED]. We have not attempted to recalculate the amount and note in paragraph 3.21 that the cost should have been recognised under "Other costs", however as there is no overall impact on the value of the Transmission Assets no adjustment has been proposed.

VISSER & SMIT

- 1.7 The 21 April 2015 CAT includes an amount of £ [REDACTED] payable to Visser & Smit for work carried out on the installation of the submarine cables, which is made up as follows:

	€
Invoiced amounts	[REDACTED]
Exchange rate (€:£)	[REDACTED]
Total (£)	[REDACTED]
Total Visser & Smit costs per 21 April 2015 CAT (£)	[REDACTED]
	-

Review of amounts paid

- 1.8 We obtained a schedule of all invoices received under the Visser & Smit contract which recorded 20 purchase invoices. This is included at **Appendix 3**.

Vouching to invoices

- 1.9 We agreed all 20 invoices recorded on the schedule to the underlying invoice.

Vouching to purchase ledger

- 1.10 We agreed all 20 invoices to the purchase ledger.

Vouching to bank statements

- 1.11 We agreed the payment of all 20 invoices to bank statements.

LS CABLE & SYSTEM

- 1.12 The 21 April 2015 CAT includes an amount of £ [REDACTED] payable to LS Cable & System for the supply of the offshore, export and spare cables, which is made up as follows:

	€
Invoiced amounts	[REDACTED]
Accrued costs	[REDACTED]
Total amounts paid/payable	[REDACTED]
Exchange rate (€:£)	[REDACTED]
Total (£)	[REDACTED]
Total LS Cable & System costs per 21 April 2015 CAT (£)	[REDACTED]
	-

Review of amounts paid

- 1.13 We obtained a schedule of all invoices received under the LS Cable & System contract which recorded 6 purchase invoices. This is included at **Appendix 4**.

Vouching to invoices

1.14 We agreed all 6 invoices recorded on the schedule to the underlying invoice.

Vouching to purchase ledger

1.15 We agreed all 6 invoices to the purchase ledger.

Vouching to bank statements

1.16 We agreed the payment of all 6 invoices to bank statements with the exception of the first invoice listed. This was instead agreed to a DONG internal statement as the bank statement for 2012 was not accessible.

Accrued amounts

1.17 The accrued amounts in relation to the LS Cable & System contract represents the final documentation invoices which are still to be invoiced and paid.

SEAWAY HEAVY LIFTING

1.18 The 21 April 2015 CAT includes an amount of £ [REDACTED] payable to Seaway Heavy Lifting for work carried out on the installation of the offshore substation which is made up as follows:

	€
Invoiced amounts	[REDACTED]
Exchange rate (€:£)	[REDACTED]
Total (£)	[REDACTED]
Total Seaway Heavy Lifting costs per 21 April 2015 CAT (£)	[REDACTED]
	[REDACTED]

Review of amounts paid

1.19 We obtained a schedule of all invoices received under the Seaway Heavy Lifting contract which recorded 21 purchase invoices. This is included at **Appendix 5**.

Vouching to invoices

1.20 We agreed all 21 invoices recorded on the schedule to the underlying invoice.

Vouching to purchase ledger

1.21 We agreed all 21 invoices to the purchase ledger.

Vouching to bank statements

1.22 We agreed the payment of all 21 invoices to bank statements.

Contractor claim

- 1.23 We agreed the value of the contractor claim, [REDACTED], referred to in paragraph 3.22 to the underlying invoice.

BALFOUR BEATTY

- 1.24 The 21 April 2015 CAT includes an amount of £[REDACTED] payable to Balfour Beatty for work carried out on the construction of the onshore substation which is made up as follows:

	£
Invoiced amounts	[REDACTED]
Total Balfour Beatty costs per 21 April 2015 CAT	[REDACTED]
	-

Review of amounts paid

- 1.25 We obtained a schedule of all invoices received under the Balfour Beatty contract which recorded 37 purchase invoices. This is included at **Appendix 6**.

Vouching to invoices

- 1.26 We agreed all 37 invoices recorded on the schedule to the underlying invoice.

Vouching to purchase ledger

- 1.27 We agreed all 37 invoices to the purchase ledger.

Vouching to bank statements

- 1.28 We agreed the payment of all 37 invoices to bank statements.

7 INDIRECT COSTS REVIEW

PROJECT MANAGEMENT COSTS

7.1 The Developers have outlined the process for allocating project management costs to the Transmission Assets. The process is as follows:

- employees register their time in SAP;
- the posting is linked to an invoice which is paid as part of the total monthly payment to the vendor;
- the difference between the WMR vendor rate and the WMR Ltd rate result in a delta invoice; and
- the delta invoice is paid as part of the total monthly payment to the vendor.

7.2 We have selected a sample of five individuals on which to test this process.

7.3 The Developers have provided details from these five employees' timesheet records. We have traced these to the invoices being raised, posted on the system and paid as follows:

Internal project management costs

Employee	September 2014 hours	Rate DKK	Cost DKK	Agreed to invoices	Agreed to ledger	Date paid	Agreed to bank
NAMES REDACTED				✓	✓	17-Nov-14	✓
				✓	✓	17-Nov-14	✓
				✓	✓	28-Sep-14	✓
				✓	✓	25-Sep-14	✓
				✓	✓	25-Sep-14	✓

8 MOVEMENTS BETWEEN THE COST TEMPLATES

8.1 We have been instructed to compare the total Transmission Asset costs as set out in the 21 April 2015 CAT with the total Transmission Asset costs included within the Indicative Transfer Value at November 2014, and to obtain explanations for variances between the two dates. These movements, prior to any adjustments detailed in this report, are summarised in the table below. However we note that the 21 April 2015 CAT does not include the adjustments made by Ofgem to the November 2014 Indicative Transfer Value as explained in paragraphs 8.19, 8.21 and 8.26.

Movement between cost templates

	November 2014 Indicative Transfer Value	21 April 2015 CAT £	Movement £
CR2 - Project common costs			
CR3 - Offshore substation			
CR4 - Submarine cable supply and installation			
CR5 - Land cable supply and installation			
CR7 - Onshore substation connection			
CR10 - General development costs			
Total capital costs			
Financing costs, transactions costs and interest during construction			
	172,295,860	168,851,433	(3,444,427)

8.2 We have sought explanations from DONG for the reasons for the significant movements in each of the cost categories and these are summarised below:

PROJECT COMMON COSTS

8.3 Project common costs have decreased by £[REDACTED] million. The largest decrease within this cost category is the release of £[REDACTED] million of contingency cost, as the costs have materialised below expectations.

8.4 A budget of £[REDACTED] million was included to cover completion costs once other WBS codes had been closed, as well as covering the handover process, including all project snagging. The actual cost was booked to the onshore substation, therefore representing a decrease within project common costs and a corresponding increase in the onshore substation cost category.

8.5 A decrease of £[REDACTED] million, comprising of £[REDACTED] million for site external consulting, £[REDACTED] million for external consultancy EPC management, £[REDACTED] million for marine warranty surveyor and £[REDACTED] million for crews boats, is partly due to the removal of

remaining commitments and partly for the estimate to complete after January 2015 due to non-OFTO package delay.

- 8.6 For the design of the high voltage/medium voltage (HV/MV) offshore substation included within project common costs, only one person of the budgeted seven was booked against this WBS code, resulting in a decrease in costs of £[REDACTED] million. The majority of the hours were booked against the installation of the HV/MV equipment under the offshore substation contract which has seen an increase in costs of £[REDACTED] m as referred to in paragraph 8.15.
- 8.7 The design cost of the HV/MV onshore substation decreased by £[REDACTED] million. The budget on this WBS code had not been decreased earlier due to design uncertainties, however as the asset has been commissioned, no further costs are expected and hence the remaining budget is no longer required.
- 8.8 A decrease of £[REDACTED] million in site commissioning management is primarily due to a postponement in employing SAP personnel.
- 8.9 Further decreases have been identified within project common costs for which Ofgem have not requested any further explanation. These are for environmental monitoring consents (£[REDACTED] million); onshore site security costs (£[REDACTED] million); onshore site running costs (£[REDACTED] million); package management for the offshore platform (£[REDACTED] million); travel and meeting costs in relation to the offshore platform (£[REDACTED] million) and management costs for HV/MV onshore (£[REDACTED] million).
- 8.10 These reductions have been offset by an increase of £[REDACTED] million for management and supervision of the offshore construction organisation driven mainly by delays in the extension of the export cable programme, leading to an extended requirement for management on site.
- 8.11 An increase in the design HV/MV onshore costs of £[REDACTED] million was primarily due to additional resources being needed for the design work due to paralleling issues resulting in the requirement for an amended design, engineering works and additional commissioning works.
- 8.12 The cost of the design of the onshore substation increased by £[REDACTED] million due to the challenges faced in having to relocate to a new site, as discussed further in 8.27, and the additional design work required as a result.
- 8.13 A further increase of £[REDACTED] million has been identified in relation to the substation control system equipment and installation. An error at the indicative transfer value phase meant that these costs were not included in the April 2014 CAT.

OFFSHORE SUBSTATION

- 8.14 Offshore substation costs have decreased by £[REDACTED] million.
- 8.15 Costs for the installation of the HV/MV equipment on the offshore substation have increased by £[REDACTED] million; part of this increase relates to a full-voltage test of the entire equipment. These costs were originally envisaged under the land cable supply and installation cost category and were moved via a budget change request. A further increase in costs is attributable to people charging their time to this WBS code rather than under project common costs as discussed in paragraph 8.6. The increase in costs was funded from the contingency, of which the remaining £[REDACTED] million was released.
- 8.16 During the installation of the offshore platform, minor damage was caused to the surface protection of the topside. Additional costs of £[REDACTED] million were therefore incurred to repair the damage caused as well as general wear and tear sustained whilst the export cables were pulled, stripped and terminated, the internal sea fastening of the electrical equipment was removed and the HV systems powered up and commissioned. We understand that this is not covered by any insurance.
- 8.17 An increase of £[REDACTED] million on the minor supply contracts for the platform were for checks carried out of the critical welds by the company DNV to ensure that diligent inspections were carried out on these welds.
- 8.18 A further increase of £[REDACTED] million for the installation and commissioning of the offshore platform was incurred as additional resources were allocated to the onshore construction yard to perform commissioning work in a mitigating measure to limit offshore commissioning work which is of a much higher cost.
- 8.19 These increases were offset by £[REDACTED] million for an Ofgem proposed adjustment which has been included within the November 2014 Indicative Transfer Value but has not been reflected within the 21 April 2015 CAT.
- 8.20 A further decrease of £[REDACTED] million was in respect of the supply, including the topside module and jacket and piles, of the offshore platform. This was the result of a highly competitive tender for the platform as well a high level of supervision on the fabrication site to ensure good quality and less work being required offshore.

SUBMARINE CABLE SUPPLY AND INSTALLATION

- 8.21 Submarine cable supply and installation costs have increased by £[REDACTED] million. This is principally as a result of an adjustment proposed by Ofgem for £[REDACTED] million which is included within the November 2014 Indicative Transfer Value but has not been reflected within the 21 April 2015 CAT.
- 8.22 A further increase of £[REDACTED] million in respect of offshore export cable installation is due to changes in the installation scope resulting in an increase in hours spent. The changes in scope impacted on an additional WBS line, also for the installation of the offshore export cable, to give a cost saving of £[REDACTED] million. The overall impact on this installation was therefore an increase in costs of £[REDACTED] million.
- 8.23 The increases are offset by a decrease of £[REDACTED] million contingency costs which was released as the costs materialised.

LAND CABLE SUPPLY AND INSTALLATION

- 8.24 Land cable supply and installation costs have decreased by £[REDACTED] million. The overall movement is not considered material to the value of the Transmission Assets however we have reviewed the cost category breakdown to identify any significant movements.
- 8.25 A decrease of £[REDACTED] million in respect of the installation of the onshore export cable is largely offset by the increase in crop loss compensation (£[REDACTED] million) and the supply of the onshore export cable (£[REDACTED] million) as noted in paragraph 8.15.

ONSHORE SUBSTATION CONNECTION

- 8.26 Onshore substation connection costs have increased by £[REDACTED] million. This is mainly as a result of an adjustment proposed by Ofgem for £[REDACTED] million which is included within the November 2014 Indicative Transfer Value but has not been reflected within the 21 April 2015 CAT.
- 8.27 Additionally, there has been an increase of £[REDACTED] million in respect of the supply of the onshore substation, which were offset by the contingency costs of £[REDACTED] million. The extra costs incurred were the result of a new site having to be located when the originally identified site could not be accessed within the time constraints of the project. Consequently, additional costs were incurred in reapplying for planning permission, including fulfilling planning requirements with the Environmental Agency; additional demolition works at the new site and accelerated procurement processes and construction works. There was a requirement for preparation works at the new site owing to the poor ground conditions which further contributed to the delays on

installation. To manage the site beyond the original completion date additional resource and security were required and support and incentive payments were made to ensure progress to closing out.

8.28 A further increase of £[REDACTED] million is attributable to amounts that have been reallocated from the project common costs as noted in 8.4.

8.29 An increase of £[REDACTED] million for installation and commissioning HV/MV costs was due to the delays from paralleling issues originating from the NGET's late decision to add two WMR bays on different sides of the sectionalizer. This caused changes in the size and weight of the HV equipment and therefore there was a requirement for additional resources for the installation and commissioning works.

GENERAL DEVELOPMENT COSTS

8.30 General development costs are consistent between the November 2014 Indicative Transfer Value and the 21 April 2015 CAT and therefore no further work has been performed in this area.

FINANCING COSTS, TRANSACTIONS COSTS AND INTEREST DURING CONSTRUCTION

8.31 Financing costs, transactions costs and interest during construction have increased by £[REDACTED] million, this is outside the scope of this review.



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