

**Barrow Offshore Transmission Assets** 

Ex Post Financial Cost Review

27 September 2011

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### Private and confidential

The Office of the Gas and Electricity Markets Authority 9 Millbank London SW1P 3GE

27 September 2011

Dear Sir

# Barrow Offshore Transmission Assets - Ex Post Financial Cost Review

# Introduction

Further to the Contract Task Order dated 4 February 2010 (Task Order Number 62/023A) we have undertaken an Ex Post Financial Cost Review ("the Review") in respect of the Barrow Offshore Transmission Assets ("the Barrow Transmission Assets").

### Work performed

In undertaking the Review our work comprised the review procedures as prescribed by Ofgem and set out in Appendix A to this report ("the Review Procedures"). Details of the results from the Review Procedures are set out in the body of this report.

### Purpose of our report and restrictions on its use

This report has been prepared solely for the benefit of The Office of the Gas and Electricity Markets Authority ("Ofgem").

We understand that Ofgem will disclose this report to the developer of the Barrow Transmission Assets and to the preferred bidder for the Barrow Transmission Assets. We consent to that disclosure on the basis that Ernst & Young LLP assumes no responsibility to any user of this report other than Ofgem and any other person that chooses to rely on it does so entirely at their own risk.

### Statement of independence

Ernst & Young LLP has been appointed by DONG Energy A/S and Centrica Plc in the past in relation to a number of matters. In order to maintain our independence in undertaking the Review confidentiality and ring fencing procedures were put in place. We therefore do not consider that our independence is impaired in relation to the Review.

Yours faithfully

**Ernst & Young LLP** 

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#### Introduction and executive summary 1.

#### 1.1 Introduction

#### 1.1.1 **Background**

Under a new regulatory regime governing the ownership and operation of offshore electricity transmission certain offshore transmission assets that were either in the course of construction or which had been constructed are to be sold by the developer/generator and purchased via a competitive tender process by an Offshore Transmission Operator.

As part of the competitive tender process Ofgem has undertaken an exercise to calculate the economic and efficient costs of the offshore transmission assets ("the Asset Transfer Value"). The Asset Transfer Value is the summation of the costs to develop complete and commission the offshore transmission asset including capital costs, interest costs, development costs and costs associated with the tender process. Potential acquirers of the offshore transmission assets are required to use the Asset Transfer Value as the basis for their bids.

In July 2009 Ofgem and RBC Capital Markets issued a preliminary information memorandum in relation to each relevant offshore transmission asset ("the PIM"). Each PIM contained an initial view of the Asset Transfer Value. This initial view was updated by Ofgem following the receipt of additional information from the developers and an updated indicative Asset Transfer Value was set out in the First Transitional Tender Information Memorandum ("the FTTIM") issued by Ofgem and RBC Capital Markets in September 2009.

Following completion of the construction of each offshore transmission asset Ofgem will undertake a final assessment of the total costs ("the Final Transfer Value"). The developers have provided further information to enable Ofgem to undertake this assessment.

As part of the tender process Ofgem requires independent verification of the costs incurred by the developers which are to be taken into account in the assessment of the Final Transfer Value.

#### 1.1.2 **Project costs**

The total project costs of the Barrow Transmission Assets can be summarised as follows:

- Asset Transfer Value per the PIM: £36.5 million (comprising total costs of £29.4 million and financing costs of £7.1 million).
- Updated Asset Transfer Value per the FTTIM: £36.5 million (comprising total costs of £29.4 million and financing costs of £7.1 million).
- The latest developer view of total costs provided by Ofgem in a spreadsheet last updated on 24 February 2010 ("the Cash Flow Schedule"): £29.4 million (which does not include financing costs). After the addition of financing costs of £2.8 million and deduction of adjustments identified following the Review Procedures the total costs are £32.1 million.

#### 1.1.3 Content of this report

To verify the costs incurred by the developer which are to be taken into account in the assessment of the Final Transfer Value we have been instructed by Ofgem to undertake certain Review Procedures. This report sets out the Review Procedures that have been undertaken and their results in the following sections:

This section gives an overview of the relevant offshore transmission assets, an outline of the Review Procedures that we have performed and an executive summary of our findings.

- ► Section 2 summarises the way in which the developer has recorded the costs that it has incurred, a detailed description of the Review Procedures performed and their results.
- ► Section 3 sets out changes in the costs included in the Asset Transfer Value between the PIM and the FTTIM and between the FTTIM and the Cash Flow Schedule.
- ▶ Section 4 summarises the Cash Flow Schedule in total and then by the principal asset categories and identifies any accrued amounts which have not yet been paid by the developer.

The report contains a number of appendices which include supporting information, including source data provided by the developer.<sup>1</sup>

# 1.2 The Barrow Transmission Assets

# 1.2.1 Location

The Barrow Transmission Assets connect the Barrow Wind Farm, located in the East Irish Sea near to Barrow-in-Furness to the onshore distribution network at Heysham, Cumbria. The onshore distribution licensee is Electricity North West Limited.

# 1.2.2 History

The Barrow Wind Farm and the Barrow Transmission Assets are owned by Barrow Offshore Wind Limited ("the Developer") a 50/50 joint venture between DONG Energy A/S and Centrica Plc. Key events in the history of the Barrow Wind Farm and the Barrow Transmission Assets are as follows:

- ▶ 2001: Barrow Offshore Wind Limited was incorporated under the then name of Warwick Offshore Wind Limited, a subsidiary of Warwick Energy Limited. The company acquired an operating license but did not trade.
- ▶ 2003: The company was acquired by Centrica (BOW) Limited (25%), DONG VE AS (37.5%) and Statkraft Energy Europe AS (37.5%) and was renamed Barrow Offshore Wind Limited. At the date of the transaction the company had incurred expenditure on licenses but construction of the wind farm had not commenced.
- ▶ 2004: Statkraft Energy Europe AS sold its stake in the company. At the year end (31 December) ownership of the company was split 50/50 between DONG Wind UK Limited and Centrica (BOW) Limited. On 22 July 2004 the Developer entered into an Engineering, Procurement, Installation and Commissioning Contract to construct the Barrow Wind Farm and the Barrow Transmission Assets ("the EPIC Contract"). The contractor appointed to undertake the work was a joint venture between Vestas-Celtic Wind Technology Ltd and Kellog Brown & Root Limited ("Vestas-KBR"). Following signature of the EPIC Contract construction work commenced.
- ▶ 2006: The Barrow Transmission Assets were permanently energised (February), the first power transmitted (March) and full commercial operation was achieved in June 2006. In September 2006 Vestas-KBR submitted its final application for payment under the EPIC Contract.
- ➤ 2007: On 12 February 2007 the Developer and Vestas-KBR entered into a supplemental agreement to terminate the EPIC Contract with effect from 31 December 2006 subject to Vestas-KBR completing snagging items ("the Settlement Agreement"). Following completion of the EPIC Contract the Developer and Vestas-KBR entered into a further contact to cover operation and maintenance of the Barrow Wind Farm and the Barrow Transmission Assets for a period of five years from 1 January 2007.

<sup>&</sup>lt;sup>1</sup> Data provided by the developer is separately identified in this report with copies being included in Appendix G.

# 1.2.3 Project assets

The Barrow Transmission Assets comprise:

- Offshore substation platform ("OSP").
- ▶ Subsea cable approximately 26.6 km in length.
- ▶ Onshore cables approximately 3.5 km in length.
- Onshore substation.
- Spares.

The boundary points, set out in the PIM are:

- Offshore: Located at the transformer cable sealing end of the 33kV cables connected to the 132/33kV transformer.
- Onshore: Located at the 132kV cable sealing ends.

# 1.3 Review Procedures

# 1.3.1 Principles

The Review Procedures have been performed on the cash expenditure that has been incurred by the Developer in constructing the Barrow Transmission Assets, in accordance with the Developer compensation principles consulted upon by Ofgem with the offshore wind industry.

Taxation and non-cash items including depreciation are not included in the Cash Flow Schedule and are therefore not within the scope of the Review Procedures.

Financing costs (also referred to as 'interest during construction') are included within this report in the calculation of total project value. The calculation of financing costs has been subject to a separate review by Ofgem and is not within the scope of the Review Procedures.

# 1.3.2 Procedures

The Review Procedures that we have undertaken are set out in Appendix A to this report.

The Developer has provided information to enable completion of the Cash Flow Schedule which sets out the capital and development costs which have been incurred. The summary page of the Cash Flow Schedule is reproduced at Appendix B.

The objective of the Review Procedures is to verify the costs incurred by the Developer, as set out on the Cash Flow Schedule, by tracing a sample of costs to the Developer's accounting systems and to source documentation e.g. purchase invoices and bank statements.

The Review Procedures do not constitute an assessment as to whether the costs of construction were incurred in an economic and efficient manner. As a generality Ofgem's expectation is that developers will procure in an economic and efficient manner in order to seek to obtain a return on investment in a competitive generation market.

### 1.3.3 Information

Based on the information provided by the Developer, Ofgem has selected a sample of costs upon which we have undertaken the Review Procedures. We performed the Review Procedures on the costs set out in the Cash Flow Schedule.

The sample selected by Ofgem comprises costs incurred in relation to the EPIC Contract as summarised in the Cash Flow Schedule. The EPIC Contract does not contain information to separately identify the costs of the Barrow Transmission Assets nor is it possible to identify these costs from purchase invoices or payment data. Therefore, in order to carry out the Review Procedures we have reviewed the costs incurred under the EPIC Contract in their entirety and then reviewed the calculation undertaken by the Developer to attribute a proportion of them to the Barrow Transmission Assets.

In order to perform the Review Procedures we visited the Developer's premises and were provided with information and explanations as described in sections 2 to 4 of this report.

#### 1.4 **Executive summary**

The costs included in relation to the construction of the Barrow Transmission Assets, as set out in the Cash Flow Schedule can be summarised as follows:

Cost category	Directly incurred costs <sup>2</sup>	Indirectly incurred costs <sup>3</sup>	Total cost	Sample tested
Offshore substation	£	-	£	£
Submarine cable supply and install	£	-	£	£
Land cable supply and install	£	-	£	-
Onshore substation	£	-	£	£
Connection contract costs	£	-	£	-
Other capitalised costs	£	£	£	-
Sub-total	£	£	£	£
Less: Proportion not attributable to Barrow Transmission Assets	£	£()	£	£(
Total direct and indirect costs	£	£	£	£
Adjustments identified from the Review Procedures			£(	
Revised total direct and indirect costs			£	
Interest during construction			£	-
Total project value			£	£

During the majority of the period of construction of the Barrow Transmission Assets (from the outset to 31 October 2006) the Developer's accounting records were maintained by Centrica plc. During this period payments to Vestas-KBR were also made by Centrica plc on behalf of the Developer.

On 31 October 2006 responsibility for maintenance of the accounting records and payments to third parties passed to DONG Energy A/S. At that date Centrica Plc provided opening balances to be included in DONG Energy A/S's accounting system.

As a result of these changes the Developer has not been able to locate all of the information required for us to undertake the Review Procedures although in a number of instances we

<sup>&</sup>lt;sup>2</sup> Directly incurred costs refer to those costs which have been incurred by the Developer with third party suppliers and contractors. As stated in section 1.3.3 the Developer has undertaken a calculation to apportion these to the Barrow Transmission Assets.

<sup>&</sup>lt;sup>3</sup> Indirectly incurred costs refer to internal costs incurred by the Developer and which have been included in the total project value and the cost of acquisition of the project in 2003.

have been able to review alternative information to corroborate amounts invoiced and paid under the EPIC Contract.

We performed the Review Procedures set out in Appendix A on a sample of the costs incurred by the Developer, as selected by Ofgem. That sample represents % of the total direct and indirect costs. As stated above our approach has been to review the whole of the EPIC Contract.

The following exceptions were noted in the results of the Review Procedures:

- We were unable to agree £ ( %) of the total payments made under the EPIC Contract up to the date of the Settlement Agreement to purchase invoices. The majority of this amount relates to the first three purchase invoices under the EPIC contract which could not be located. Alternative documentation was presented to us to support this amount, primarily in the form of applications for payment from Vestas-KBR and certificates of payment issued by the Developer.
- We did not agree £ ( ) of the total payments made under the EPIC Contract up to the date of the Settlement Agreement to bank statements. These payments, which were initiated by Centrica plc on behalf of the Developer, were tested on a sample basis only. We note that clause 4.5 (e) of the Settlement Agreement which is signed by the Developer and Vestas-KBR confirms that all amounts up to that date had been paid. 4
- We were unable to agree payments made under the EPIC Contract to the Developer's accounting ledgers for the period in which they were maintained by Centrica Plc. Payments in this period comprised £ which represents % of the total project value. We have been provided with a purchase ledger spreadsheet maintained by Centrica plc which includes all of these payments comprising this amount.

In addition in performing the Review Procedures as part of our review we noted the following items:

- Certain non-EPIC costs have been allocated to the value of the Barrow Transmission Assets using a percentage based on a proportion of the original EPIC Contract value. Should this percentage be revised to reflect the Developer's calculation including variation orders and variation order requests total costs would increase by £
- The Developer's calculation of the proportion of the EPIC Contract attributable to the Barrow Transmission Assets is based upon the value of the original EPIC Contract uplifted for the value of variation orders and variation order requests. Under the Settlement Agreement the Developer and Vestas-KBR agreed a revised value for the EPIC Contract to include all variation orders and variation order requests which also included a reduction for delay liquidated damages. We have undertaken an alternative calculation of costs based on the revised value which suggests that the value attributable to the Barrow Transmission Assets as calculated by the Developer is overstated by £
- A variation order relating to the reburial of the offshore transmission cable with a value of was agreed after the date of the Settlement Agreement. This has not been included in the Developer's calculation of total costs.
- ► The Developer's approach in uplifting all categories of cost to reflect the value of variation orders and variation order requests and the overall reduction of all costs to remove amounts attributable to the Barrow Wind Farms means that the costs attributed

<sup>&</sup>lt;sup>4</sup> Attached as Exhibit 1 to Appendix G.

<sup>&</sup>lt;sup>5</sup> See section 2.2.2.

<sup>&</sup>lt;sup>6</sup> This calculation is set out in Appendix C (on page 23)

to each category may not reflect the underlying costs incurred for that category. We have undertaken an alternative calculation to attribute the variation orders to the categories of cost in the Cash Flow Schedule to which they relate with the following results:

Category	Per Cash Flow Schedule	Alternative calculation	Difference
Offshore Substation	£	£	£
Submarine cable supply & install	£	£	£(
Land cable supply & install	£	£	£(
Onshore substation costs	£	£	£(
EPIC Contract costs	£	£	-
Connection contract costs	£	£	-
Other capitalised costs	£	£	-
Sub-total	£	£	-
Less: Amounts relating to Barrow Wind Farm	£(	£(	-
Total direct and indirect cost	£	£	-

Non-EPIC costs include £ of staff time from DONG and Centrica. We understand that amounts included in relation to DONG, which makes up \( \bigcup\_{\pi} \% \) of the total are based on an hourly rate of £ for all grades of staff. This rate was agreed by DONG Energy A/S and Centrica Plc as an arm's length price. As a result the rate is likely to include overhead and profit elements. We note that the rate of £ hour is equivalent to the Project Manager rate set out in the EPIC contract.

The net impact of the matters identified as part of our review totals a reduction in total direct and indirect costs of £

Interest during construction of £ was advised by Ofgem.

We understand that no accrued amounts are included in the costs of the Barrow Transmission Assets.

#### 2. **Review Procedures**

#### 2.1 Introduction

In order to verify the costs included on the Cash Flow Schedule we have performed the Review Procedures detailed in Appendix A in relation to a sample of cost items selected by Ofgem.

This section of the report contains:

- An overview of the way in which the Cash Flow Schedule has been prepared from the information which has been compiled by the Developer.
- The results of the Review Procedures in relation to:
  - Directly incurred costs: Those costs that have been incurred by the Developer with third parties in relation to construction of the Barrow Transmission Assets.
  - Indirectly incurred costs: Those internal costs that have been incurred by the Developer and which have been allocated to the Barrow Transmission Assets.

We note that the nature of the EPIC Contract means that the majority of costs incurred by the Developer have been required to be allocated between the Barrow Transmission Assets and the Barrow Wind Farms. The basis of allocation is discussed in section 2.2.2.

#### 2.2 **Preparation of the Cash Flow Schedule**

#### 2.2.1 Accounting records

# Identification of relevant costs

The Cash Flow Schedule in relation to the Barrow Transmission Assets was prepared based upon information that has been provided by the Developer.

As set out in section 1.2.2 the Barrow Transmission Assets and the Barrow Wind Farm were constructed by Vestas-KBR under the EPIC Contract. The provisions of the EPIC Contract do not separately identify the costs of the Barrow Transmission Assets.

Furthermore following delays in construction, snagging issues and disagreements over variation orders and variation order requests the Developer reached an overall agreed settlement with Vestas-KBR to complete work under the EPIC Contract.

As a result it is not possible to directly identify the costs incurred in construction of the Barrow Transmission Assets from contractual documentation, invoices or payment data.

In order to identify the costs incurred in construction of the Barrow Transmission Assets the Developer has undertaken a calculation to attribute a proportion of the total cost of the EPIC Contract, variation orders and variation order requests to the Barrow Transmission Assets. Details of the methodology applied by the Developer is set out in Appendix C, in summary:

The Developer obtained an estimate from Vestas-KBR of the proportion of the original value of the EPIC Contract that was attributable to the Barrow Transmission Assets. This estimate was provided at a summary level.8

Variation orders relate to changes in scope agreed between the Developer and Vestas-KBR whereas variation order requests were made by Vestas-KBR and had not been agreed by the Developer. 
<sup>8</sup> A copy of the letter containing the estimate is included as Exhibit 2 to Appendix G.

- ► The Developer performed its own assessment of the value of the Barrow Transmission Assets at a component level and compared this to Vestas-KBR's estimate to determine whether it was reasonable. 9
- ► Having determined that Vestas-KBR's estimate of the costs attributable to the Barrow Transmission Assets was reasonable the Developer has increased the costs estimated by Vestas-KBR by adding the value of relevant variation orders and variation order requests.
- ▶ In addition to costs incurred under the EPIC Contract the Developer has included other costs incurred in constructing the Barrow Transmission Assets (referred to as non-EPIC costs). These costs primarily relate to project management, acquisition of the project in 2003, legal fees and connection work which were performed outside of the EPIC Contract.
- ► The Developer has made an adjustment to the total costs calculated from the above steps in order to remove a proportion of those costs which it considers to relate to the Barrow Wind Farm.

The results of the above calculation can be summarised as follows:

Cost category	Total cost
Proportion of EPIC Contract attributable to the Barrow Transmission Assets	£
Value of variation orders attributable to the Barrow Transmission Assets	£
Non-EPIC costs (including indirect costs)	£
Sub-total	£
Reduction to reflect amounts attributable to the Barrow Wind Farms	£(
Total costs attributable to the Barrow Transmission Assets	£

The Developer's calculation has been transferred to the Cash Flow Schedule with the costs being categorised into six headings.

# Developer's payment process relating to the EPIC Contract

Under the terms of the EPIC Contract, payments to Vestas-KBR were made in accordance with the provisions of clause 17. The payment process is set out at Appendix D, in summary:

- On the first day of the month (day 1) Vestas-KBR was to submit an application for payment setting out the amounts which it believed was payable before the end of that month.<sup>10</sup> The applications for payment submitted by Vestas-KBR included both amounts in respect of work previously undertaken and amounts in relation to work which it expected to complete before the date on which it would issue its invoice.
- ▶ By day 15 the Developer was to issue a certificate of payment in response to the application for payment.
- ▶ Up until day 25 the Developer retained the right to re-issue its certificate for payment should elements of work included on the application for payment or the initial certificate of payment remain incomplete.
- Vestas-KBR issued an invoice which was due for payment on day 30.

<sup>&</sup>lt;sup>9</sup> This analysis is reproduced at Appendix F.

<sup>&</sup>lt;sup>10</sup> The payment terms in the EPIC Contract set out a monthly payment schedule (section III, clause 3).

### 2.2.2 Allocation of costs

### Bases of allocation used

In undertaking its calculation of costs attributable to the Barrow Transmission Assets by applying the methodology described in Appendix C and in adding non-EPIC costs the Developer has made a number of assumptions with regard to the allocation of costs. These can be summarised as follows:

- Costs incurred under the EPIC Contract have been allocated based upon information supplied by Vestas-KBR.
- Costs incurred in relation to variation orders and variation order requests have been allocated by the Developer identifying those that were specifically relevant to the Barrow Transmission Assets. Where the Developer's value of the variation order request was different to Vestas-KBR's a value representing the mid-point of the two estimates is included in the calculation.
- ➤ Certain non-EPIC costs incurred by the Developer which relate to both the Barrow Transmission Assets and the Barrow Wind Farm (e.g. project management costs and project acquisition costs) have been allocated based on the proportion of the original EPIC Contract value attributed by Vestas-KBR to the Barrow Transmission Assets ( ).
- As set out in the table in section 2.2.1 above the Developer has reduced total costs by for costs attributable to the Barrow Wind Farm. This calculation was based on a cost by cost assessment of the components included in the Barrow Transmission Assets.

### Comments on the bases of allocation used

In applying a factor of % to certain non-EPIC costs the Developer has used Vestas-KBR's estimate of costs attributable to the Barrow Transmission Assets as a proportion of the original EPIC Contract value. Should the value of relevant variation orders be added to Vestas-KBR's estimate and the overall EPIC Contract value be updated to reflect the terms of the Settlement Agreement that percentage would increase to % which would result in a further £ \$\text{\$\tex

The Developer has scaled its calculation of costs downwards by £ to reflect amounts attributable to the Barrow Wind Farms. The calculation is based on a component level assessment however, rather than individual components being excluded the Developer has applied the reduction across all cost categories. The implication of this approach is that the category by category analysis of costs does not reflect the underlying costs incurred.

# 2.3 Directly incurred costs

# 2.3.1 Work performed

The sample of directly incurred costs selected by Ofgem in relation to the Barrow Transmission Assets all relate to work performed by Vestas-KBR under the EPIC Contract. The table below sets out the sample selected and a reconciliation to the total costs of the Barrow Transmission Assets, as follows:

<sup>11</sup> Based on % calculated as £

Contract element	Total cost	Included in sample
Offshore Substation	£	£
Submarine cable supply & install	£	£
Land cable supply & install	£	-
Onshore substation connection	£	£
Total EPIC Contract costs	£	£
Connection contract costs	£	-
Other capitalised costs (including indirect costs)	£	-
Sub-total	£	£
Reduction to reflect amounts attributable to the Barrow Wind Farm	£(	£()
Total costs attributable to the Barrow Transmission Assets	£29,413,50	£25,046,973

It should be noted that the EPIC Contract only contained a limited breakdown of the overall value into constituent elements. As a result the Developer has undertaken a calculation to attribute costs to each contract element. The basis of this calculation is described in Appendix C where we note:

- ► The value of variation orders and variation order requests has been allocated proportionately across all EPIC Contract elements. Therefore the values included in the table above may not reflect the underlying costs of each contract element although the overall total would not change. We set out an alternative calculation in Appendix C to attribute variation orders to individual asset categories.
- ▶ Project management and balance of plant costs which are included in the EPIC Contract have been allocated proportionately across all relevant EPIC Contract cost elements.
- ► The reduction to reflect amounts attributable to the Barrow Wind Farm has been applied to all cost elements.

Given the sample of costs selected by Ofgem all relate to the EPIC Contract our approach in undertaking the Review Procedures has been to review the costs incurred under the EPIC Contract as a whole and then to review the calculation undertaken by the Developer to allocate costs to the Barrow Transmission Assets.

The work performed in relation to these costs is set out in steps 1 to 6 of section 2 of the Review Procedures set out in Appendix A.

# 2.3.2 Results

The results of the Review Procedures are set out in Appendix E.

Based on the total value of the EPIC Contract as set out in the Settlement Agreement the results of the Review Procedures can be summarised as follows:

Cost category	£	%
Total value of payments under the EPIC Contract (as stated in Settlement Agreement) to February 2007 <sup>12</sup>	£	<b>%</b>
Value agreed to purchase invoices	£	%
Value agreed to bank statement	£	%
Value agreed to accounting ledgers	£ 13	%

The results set out in the above table are discussed in more detail below.

### **Total value of EPIC Contract**

In relation to the total contractual value:

- ► The original value of the EPIC Contract of £ was agreed to the signed agreement.
- ► The revised value of the EPIC Contract included in the table above was agreed to the signed Settlement Agreement and the final purchase invoice.

The calculation performed by the Developer is based on the original value of the EPIC Contract plus relevant variation orders and variation order requests. The Settlement Agreement incorporated both settlement of the variation orders and variation order requests and agreement of delay liquidated damages.

We have undertaken an alternative calculation of amounts attributable to variation orders, variation order requests and delay liquidated damages based on the value of the EPIC Contract as stated in the Settlement Agreement. This calculation suggests that the value attributable to the Barrow Transmission Assets as calculated by the Developer is overstated by £

We noted that, following the date of the Settlement Agreement, the Developer and Vestas-KBR had agreed a further variation order in respect of reburial of the offshore transmission cable for a value of £ \_\_\_\_\_\_. The Developer has not included this amount in its calculation.

### Value agreed to purchase invoices

The Developer was unable to provide purchase invoices to support the total value of the EPIC Contract. The first three invoices issued by Vestas-KBR could not be located, these invoices which dated from 2004 amounted to \(\bigsigm\)% of the amount not agreed to invoice.

In addition to the balance agreed to purchase invoices of £  $\pm$  the remaining balance of £  $\pm$  was supported by:

- Applications for payment issued by Vestas-KBR and certificates of payment issued by the Developer: £ (including the first three invoices referred to above).
- ► An adjudication decision in relation to settlement of variation orders: £

We note that the applications for payment issued by Vestas-KBR through the period of the EPIC Contract support the value of all invoices raised to that point (i.e. all invoices with the exception of the final invoice). In addition all amounts for which an invoice could not be located have been agreed to the purchase ledger spreadsheet (see below).

<sup>14</sup> The calculation of this amount is set out in Appendix C.

<sup>&</sup>lt;sup>12</sup> The value of £ represents the amount agreed by the Developer and Vestas-KBR in the Settlement Agreement after deduction of the incentivisation mechanism payment, retentions and liquidated damages (as described in Appendix C).

<sup>&</sup>lt;sup>13</sup> The remaining value was agreed to a purchase ledger spreadsheet provided by the Developer.

# Value agreed to bank statements

We understand that for the majority of the period in which payments were made to Vestas-KBR under the EPIC Contract these were initiated by Centrica Plc on behalf of the Developer. As a result of difficulties in obtaining bank statements we verified a sample of payments totalling £ 1. In relation to the amount not tested we note:

- ► Clause 4.5 of the Settlement Agreement signed by both the Developer and Vestas-KBR states that payments totalling £ had been made prior to the date of that agreement.
- ► The remaining payment of £ was part of our sample and was verified to bank statement.

In addition we were able to trace all payments to the purchase ledger spreadsheet provided by the Developer (see below). The purchase ledger spreadsheet includes payment dates.

# Value agreed to accounting ledgers

We understand that during the majority of the period in which payments were made to Vestas-KBR under the EPIC Contract the accounting ledgers were maintained by Centrica Plc on behalf of the Developer. Responsibility for the accounting ledgers was transferred to DONG Energy A/S from 31 October 2006. At the date of transfer all amounts payable under the EPIC Contract had been invoiced and paid with the exception of the final invoice.

As a result we were only able to agree payment of the final invoice of £ to the SAP accounting ledgers maintained by DONG Energy A/S.

At the date of transfer of the accounting ledgers Centrica Plc provided DONG Energy A/S with an opening balance to be included in SAP. As part of the transfer of accounting records Centrica Plc supplied a detailed purchase ledger for all amounts paid on behalf of the Developer up to 31 October 2006. This purchase ledger is in Excel spreadsheet format. Upon review we have been able to identify all remaining payments made to Vestas-KBR from the purchase ledger spreadsheet (i.e. the remaining £

The audited statutory accounts of the Developer shows fixed asset additions of £ in the period from 1 January 2004 to 31 December 2006, the period of construction of the Barrow Wind Farm and the Barrow Transmission Assets. In the year to 31 December 2006 this amount was transferred from 'Assets under construction' to 'Windfarm assets'. This amount compares to the total value of the EPIC Contract as set out in the Settlement Agreement of £ (excluding liquidated damages and retentions).

# 2.4 Indirectly incurred costs

# 2.4.1 Work performed

The sample selected by Ofgem did not include any indirectly incurred costs in relation to the Barrow Transmission Assets. However, we discussed the basis of inclusion of indirectly incurred costs with the Developer.

# 2.4.2 Results

Other capitalised costs of £ included in the table in section 2.3.1 include indirect costs as follows:

Cost type	Total cost	
Purchase of project from Warwick Energy	£	
Employers' personnel (DONG)	£	
Employers' personnel (Centrica)	£	
Total indirect costs	£	
Direct costs (primarily project management and legal fees)	£	
Total capitalised costs	£	

All indirect costs including the cost associated with the purchase of the project from Warwick energy have been allocated to the Barrow Transmission Assets using a ratio of calculated based on the proportion of the original EPIC Contract value attributed by Vestas-KBR to the Barrow Transmission Assets.

We understand from the Developer that personnel charges relates to staff who were employed on the project during the construction phase. In relation to the DONG personnel costs these were recharged to the project based on actual hours spent by staff multiplied by hourly rates of £ per hour plus expenses. This rate was agreed by DONG Energy A/S and Centrica Plc as an arm's length price, as a result it is likely to include overhead and profit elements. We note that the rate of £ hour is equivalent to the Project Manager rate set out in the EPIC contract.

The cost schedule prepared by the Developers states that the total purchase value of the project from Warwick Energy was advised by the VP of DONG VE.

<sup>&</sup>lt;sup>15</sup> We have seen a sample of invoices showing the £ hour rate applied to hours worked.

# 3. Variance analysis

# 3.1 Introduction

The total project value as set out in the Cash Flow Schedule is £29,413,503 excluding financing costs. Changes in the total project value over time can be summarised as follows:

- ▶ Per the PIM and the FTTIM: £36.5 million (comprising total costs of £29.4 million and financing costs of £7.1 million).
- ► Per the Cash Flow Schedule: £29.4 million plus interest during construction of £2.8 million.

This section contains the results of the Review Procedures described in Appendix A. 16

# 3.2 Reconciliation between the PIM and the FTTIM

We note that there are no differences between the value of the Barrow Transmission Assets included in the PIM and the FTTIM.

# 3.3 Comparison of the project value per the FTTIM and the Cash Flow Schedule

We note that with the exception of interest during construction which has reduced from £7.1 million to £2.8 million there are no differences between the value of the Barrow Transmission Assets included in the PIM and the FTTIM. As set out in section 1.3.1 finance costs have been subject to a separate review by Ofgem.

<sup>&</sup>lt;sup>16</sup> Appendix A, step 7 of section 2 and step 5 of section 3.

# 4. Project value

# 4.1 Total project value

The total value of the Barrow Transmission Assets calculated by the Developer is £32,240,023 including financing costs. The total project value is made up of the following costs:

Cost category	Total cost
Offshore substation	£
Submarine cable supply and installation	£
Land cable supply and installation	£
Onshore substation	£
Connection contract costs	£
Other capitalised costs	£
Sub-total Sub-total	£
Less: Proportion not attributable to Barrow Transmission Assets	£(
Total direct and indirect costs	£
Interest during construction	£
Total project value	£32,240,023

# 4.2 Payments made by the Developer

The total direct and indirect costs included in the total project value comprise amounts which have been invoiced and which we understand have been paid. As construction of the Barrow Transmission Assets was completed in 2006 with final payments under the EPIC Contract being made in 2007 we understand that there are no accrued amounts included in the table set out in section 4.1.

We note that as at the date of the Settlement Agreement £ was retained by the Developer pending completion of snagging items. We understand that at least some of this amount has been paid in the period from the date of the Settlement Agreement and that the majority of the snagging items relate to the Barrow Wind Farms.

We note that the retention amount does not impact on the Developer's calculation of costs incurred in relation to the Barrow Transmission Assets as described in Appendix C. However, should an alternative calculation approach be applied, the value of any retention not paid which was attributable to the Barrow Transmission Assets would potentially reduce total costs.

# Appendix A Review Procedures

# 1. Background Work

- 1. Ascertain the processes and policies undertaken by the developer for making payments to suppliers for all direct costs incurred for the project.
- Ascertain the processes and policies and metrics used by the developer by which shared costs (e.g. overheads and other indirect costs which may be split between transmission and generation) have been allocated to the project.

# 2. Review Work - Directly Incurred Costs

- 1. For a selected sample contract trace expenditure from the cash flow schedule to the relevant contract or other source record.
- 2. From the contract trace to an invoice(s) or journal.
- 3. From the transaction selected in (2) trace through the purchasing systems (from Purchase Day Book or equivalent to Purchase ledger or equivalent)
- 4. For same transaction trace through to the payment system (from the purchase ledger through to the general / nominal ledger). Confirmation includes verification of the payment summary with the supplier and ensuring calculations are arithmetically correct and free from error.
- 5. For the same transaction trace the payments made from the general ledger through such that the payment can be agreed to a debit entry on the bank account (debit entry being from the companies perspective and for avoidance of doubt represents a cash expense i.e. cash outlay from the business).
- 6. Prepare a report detailing the contractual payments made or due their cause (ie main contract or variations or claims, and the extent to which the contract provide warranties or ongoing support and the work undertaken with an appendix for copies of the support documentation on the selected contract and allocation.
- 7. Compare total costs at Project Close with Project Value at August 2009.

  Obtain supporting information and explanations for variances between the two dates.

# 3. Review Work - Indirectly Incurred Costs

- 1. For a sample of transactions trace from the asset schedule to journal entries made on the accounting system
- 2. Confirm the amount allocated has been determined as prescribed in the cost allocation methodology the Developer has indicated using

- appropriate metrics in respect of the allocation of such costs between transmission and generation.
- 3. Confirmation includes ensuring calculations are arithmetically correct and free from error.
- 4. Prepare a report detailing the work undertaken with an appendix for copies of the support documentation on the selected contract and allocation.
- 5. Compare total costs at Project Close with Project Value at August 2009. Obtain supporting information and explanations for variances between the two dates.

# Appendices B, C, D, E & F redacted