



**REPORT TO OFGEM ON THE OFFSHORE TRANSMISSION
SECOND TRANSITION TENDER ROUND -**

**UPDATED EX ANTE COST REVIEW OF GWYNT Y MOR WIND
FARM TRANSMISSION ASSETS**

As of 12 October 2012

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1 EXECUTIVE SUMMARY

- 1.1 Grant Thornton UK LLP (Grant Thornton) have been instructed by Ofgem to review the updated ex ante cost information prepared by Gwynt Y Mor Offshore Wind Farm Limited (GYM Limited) for the transmission assets (Transmission Assets) of the Gwynt y Mor Wind Farm (the Wind Farm).
- 1.2 The Wind Farm is being developed as an unincorporated joint venture through GYM Limited. The company is ultimately owned by RWE Innogy GmbH (60%), Siemens AG (10%) and Stadwerke Munchen GmbH (30%). It is for an installed capacity of 576MW.
- 1.3 To date, GYM Limited has prepared and submitted a number of cost templates to Ofgem of which we have seen six. In early 2011, we conducted a review to assess the accuracy, completion and allocation of the Initial Cost Template against the Previous Cost Template for the Wind Farm Transmission Assets based on supporting information and methodology provided by them. The purpose of a review at that stage was to:
- determine if GYM Limited's cost estimates required updating for the next stages of the transfer process, the Qualification To Tender and Invitation To Tender (ITT);
 - aid technical analysis by identifying areas where the cost information indicates that further technical review may be required to consider efficiency as part of determining the indicative value for the ITT stage of the process; and
 - assist determination of indicative value for the ITT by reviewing the accuracy, allocation and completeness of cost information.
- 1.4 Our findings were set out in a draft report to Ofgem dated 9 March 2011.
- 1.5 In the period between March 2011 and August 2012, GYM Limited continued to revise its assessment of the ex ante costs of the Wind Farm Transmission Assets, and the latest revision to the cost template dated 3 August 2012 (the Latest Cost Template) has been submitted to Ofgem. We compare three of those: the first cost template submitted on 3 November 2010 (the Initial Cost Template); the previous cost template reviewed by Grant Thornton in our earlier report¹ (the Previous Cost Template); and the Latest Cost Template.

¹ Submitted on 24 January 2011

- 1.6 In this report we set out our review of the cost assessment which has been conducted in line with the principles of our initial review set out above at paragraph 1.3. Further detail on our work is set out below in Section 4.
- 1.7 The Latest Cost Template shows an increase in costs of the Gwynt Y Mor Wind Farm Transmission Assets to £[REDACTED] million, a total increase of [REDACTED] by ([REDACTED]%) from the Initial Cost Template, and an increase of £[REDACTED] million ([REDACTED]%) from the Previous Cost Template as set out in the table below. These figures exclude interest during construction (IDC):

TABLE REDACTED AT DEVELOPER'S REQUEST

- 1.8 It is clear from our exchanges with GYM Limited that it considers some of the initial budgeting to have been inaccurate. This is particularly evident in the transfer vessels and the project management support costs which have both materially increased. In an internal presentation, GYM Limited identified a number of drivers for the increase in these costs which include the multi-contracting of foundations installation and of other packages, an increase in the number of vessels and using a two port and related wind turbine generator installation vessel strategy. GYM Limited has made it clear that it considers a reconciliation to the original budgets is not feasible.
- 1.9 The most significant movements between the Previous Cost Template and the Latest Cost Template are the fall in contingencies of £[REDACTED] million, the increase in offshore vessels and marine costs of £[REDACTED] million², the inclusion of a spare transformer for the onshore substation of £[REDACTED] million, an increase in project management support costs of £[REDACTED] million and a further increase in other development costs (particularly Port Facilities and Personnel Transfer Vessels) of £[REDACTED] million. GYM Limited has uploaded supporting documentation and/or explanations for many items included within the cost template to the Ofgem data room.

² Being £XXX million within offshore substation costs and £XXX million within development costs

- 1.10 We have agreed a substantial proportion of the costs of the transmission business (68.4%) to the major contracts entered into between the Wind Farm and the subcontractors for the various packages. There is a further 7.3% allocated to contingencies and 6.5% to Project Management Support Services which are both discussed below. We have agreed other costs to contract options, variation orders, invoices or working schedules with underlying supporting documentation where available. However, we would like to bring to Ofgem's attention four items - contingencies, project management support services, cost allocation for other costs, and certain issues noted in relation to the procurement processes followed for the project, all of which are discussed further below:

A CONTINGENCIES

- 1.11 The contingency provision included within the Latest Cost Template totals £[REDACTED] million and is broken down as follows:

TABLE REDACTED AT DEVELOPER'S REQUEST

- 1.12 The contingency provision of £[REDACTED] million is [REDACTED]% of the pre-contingency pre-finance cost assessment, which is similar to what we have seen on other projects we have reviewed. However it is not clear without further analysis whether the contingency level was set at the same stage of development of each project and therefore whether this is reasonable. Technical advice may assist in that.
- 1.13 The overall value of contingencies has dropped by [REDACTED]% from the provision included in the Previous Cost Template of £[REDACTED] million and is reflective of the fact that the Wind Farm is now under construction and that there is a much greater degree of certainty regarding costs. In particular the contingency provisions for substations and grid connection costs have fallen by £[REDACTED] million. However there have been corresponding cost increases within offshore costs of £[REDACTED] million. Contingencies have also gone up in certain areas (cross project activities, port and infrastructure, unidentified contingency) and decreased significantly less than the average in subsea cables. The new contingency for port and infrastructure is noteworthy given that port facilities costs have already increased from £[REDACTED] million to £[REDACTED] million within development costs. Cost allocation and a dual port strategy may impact on this but it will require further clarification from GYM Limited.
- 1.14 The table below summarises the overall movement in the main cost areas taking into account both changes in actual allocated cost and allocated contingency:

TABLE REDACTED AT DEVELOPER'S REQUEST

- 1.15 We would generally expect to see the level of contingencies drop during a project with the level of hard costs rising, but by less than contingencies drop so that there is an overall drop in cost. That has not been the case here. We do note however that that is not always the case and given that there is limited experience of offshore wind farms certain elements may simply have been mis-estimated or have taken longer than expected to carry out.
- 1.16 The assessment of contingencies has been undertaken by GYM Limited by reference to the extensive risk register which has been prepared for the whole Wind Farm project, and full details of the calculation of contingency are set out from paragraph 4.71 below.
- 1.17 The contingency provision now includes an amount of £[REDACTED] described as "opportunities" to provide for potential cost savings within the Wind Farm project. We have identified opportunities with a total value of £[REDACTED] which are currently allocated to non-transmission assets only, but which we consider require some allocation to the Transmission Assets based upon the descriptions within the opportunities register.
- 1.18 GYM Limited has advised us that these opportunities have been assessed upon where it expects the savings to fall, but has conceded that these opportunities may require a degree of allocation to the Transmission Assets based upon Cost Allocation Key 2. We note that if these opportunities were to be allocated to the Transmission Assets using Cost Allocation Key 2 of 19.9%, we would expect a reduction in the value of the contingencies provision of approximately £[REDACTED].
- 1.19 We have noted that the risk register contained a number of costs that were allocated to the Transmission Assets at a rate of 45%, and a number of others costs allocated at rates of 14% and 16%. We are advised by GYM Limited that costs currently allocated to the Transmission Assets at 45% should be allocated in line with Cost Allocation Key 1 (which is staff time based as set out in paragraphs 3.17 to 3.20, currently 24.4%), and that costs currently allocated to the Transmission Assets at 14% and 16% should be allocated in line with Cost Allocation Key 2 (which is based on overall transmission and generation cost as set out in paragraphs 3.21 to 3.25, currently at 19.9%). Whilst these revised rates result in lower and higher contingency amounts respectively, the impact upon the contingency provision as a whole is not significant.

- 1.20 We have reviewed the actual risks included within the register. However as we advised in our previous report, technical assistance would be necessary if Ofgem wished to fully confirm the reasonableness of the amounts in relation to the "lowest", "most probable" and "high" costs payable in the event that the risk actually occurs as well as the assessments of the likelihood of each event occurring; for example, we are unable to determine if it is reasonable to provide for a 75% chance of delays in export cable installation due to concerns over the readiness of the subcontractor which is then given a weighted contingency value (considering cost and likelihood) of £[REDACTED] million, 100% allocated to the Transmission Assets³.
- 1.21 On that basis, whilst we are able to say that the contingency provision has been calculated in line with the policy stated by GYM Limited, we are unable to state whether the amounts which form the basis for the contingency provision are reasonable.
- 1.22 By the time of the ex post cost assessment, the value of contingencies will fall to zero, as at that stage all costs will be known. The impact if a contingency is inflated is that the minimum transfer price payable increases (as this is set at 75% of the indicative cost).

B PROJECT MANAGEMENT SUPPORT SERVICES COSTS

- 1.23 The current budget for the project management support services costs of the Wind Farm during the period of construction amounts to £[REDACTED] million, an increase of £[REDACTED] million (approximately [REDACTED] %) on the budgeted costs in this area at the time of the Previous Cost Template. £[REDACTED] 401 of the costs have been allocated to the Transmission Assets, an increase of £[REDACTED] million (approximately [REDACTED] % of the increase in project management support services costs).
- 1.24 We have sought explanations from GYM Limited for the increase in project management support costs in light of the magnitude of the increase. It has advised us that there are a number of drivers for the increase in these costs which include the multi-contracting of foundations installation and of other packages, an increase in the number of vessels and using a two port approach. However it has advised us that a reconciliation of these increases is not possible.
- 1.25 GYM Limited also provided us with organograms of the Wind Farm staffing structure at May 2010 and at July 2012, which do show a substantial increase in staff numbers over this period.

³ Risk 754

- 1.26 We understand that a line by line reconciliation would be time consuming and costly. However, if there is not at least a reconciliation/good explanation of the main areas where costs have increased (for example how much extra in staffing costs as a whole, how much in other areas) we are unable to substantiate the increase in project management support services costs or consider if such increases are reasonable and should be allocated to the project. GYM Limited has advised us that it considers that its previous budget for project management support services costs of £[REDACTED] million was prepared at an early stage in the project life, and whilst it cannot provide a substantiation of the increase, it is satisfied that the current budget represents a much better informed view of the costs that will be incurred over the length of the project.
- 1.27 We recognise that at the time of the ex post cost review, all costs will be capable of substantiation but would expect GYM Limited to be capable of providing greater detail than it has so far. Ofgem should therefore consider whether it requires any additional work to be performed in this area and whether it requires GYM Limited to provide a greater level of explanation than the two differing organisation charts that are the main justification we have to date.

C COST ALLOCATION

Movements in cost allocation rates

- 1.28 In the Initial Cost Template, most costs that were not capable of direct allocation to either the Transmission Assets or the non-transmission assets were allocated to the Transmission Assets at the rate of 13.14%. This allocation percentage was calculated based upon the cost of the Transmission Assets as a percentage of total Wind Farm project.
- 1.29 In the Previous Cost Template, cost allocation methods were revised and three separate allocation rates were used:
- estimates of time spent by project staff of between 13.7% and 35.4%
 - cost allocation key of 24.2%, as detailed at paragraph 3.11
 - Transmission Asset costs as a percentage of total Wind Farm costs of 14.7%.
- 1.30 In the Latest Cost Template, the cost allocation methodology was again revised, and two separate allocation rates have been used:

- Cost Allocation Key 1 of 24.4%⁴, based upon expected time spent on the Transmission Assets (see paragraphs 1.33 to 1.35)
- Cost Allocation Key 2 of 19.9%, based upon Transmission Asset costs as a percentage of total Wind Farm costs (see paragraphs 1.36 to 1.37). This is an increase from the prior rate of 13.1%.

Calculations

1.31 The revised cost allocation methods in the Latest Cost Template now use two distinct allocation keys that are the principal cost allocation method for shared costs (though there are other methods used for certain individual costs):

1.31.1 Cost Allocation Key 1 allocates costs on the basis of time spent by staff on the Transmission Assets as a percentage of total time.

1.31.2 Cost Allocation Key 2 allocates costs on the basis of Transmission Assets costs as a percentage of total Wind Farm costs.

1.32 Whilst we are satisfied that the general methodology behind these two cost allocation bases is in line with standard cost accounting principles, we have concerns in relation to certain aspects of the underlying calculations of these cost allocation keys and in the way that these cost allocation keys have changed which could result in an incorrect transfer cost if such cost allocation keys are not appropriate.

Cost Allocation Key 1

1.33 No information is available to GYM Limited in relation to the amount of time its staff spent on the Transmission Assets prior to December 2010 as records making that distinction were not kept. GYM Limited has therefore decided that all costs that are allocated using Cost Allocation Key 1 prior to December 2010 will use the same allocation percentage as for December 2010 of 53.9%.

⁴ Average rate

- 1.34 As a result, project management support services costs of £[REDACTED] are included within the Transmission Assets costs from January 2009 to November 2010. GYM Limited believes that its decision to allocate these costs to the Transmission Assets is justified because many of the shared roles were heavily focused on the Transmission Assets during this period as the project needed to satisfy Offshore Transmission Owner (OFTO) transitional tender round entry criteria, and as such contracts for the Transmission Assets were prioritised over generation contracts during this period.
- 1.35 We can see that there may be anecdotal reasons for such a basis of allocation and we can see that post December 2010 the allocation to transmission has been on a downward trend. Therefore assuming the 53.9% for prior months could be reasonable (or even an understatement). However, we are unable to confirm what an appropriate pre December 2010 rate would be on the basis of GYM Limited's explanations to date alone. As such we consider that further substantiation is required if Ofgem wish to have the best available evidence of the appropriate allocation rate in this period. That rate might be higher or lower than what has been stated so far. Kema as technical advisor would hopefully be able to confirm what would actually have been at least the anticipated split of work prior to December 2010 based on project workstreams/GANTT charts (assuming that these are available). That would enable us to confirm whether GYM Limited's working assumption that at least 53.9% of time was spent in relation to transmission up until December 2010 is appropriate.

Cost Allocation Key 2

- 1.36 In its calculation of Cost Allocation Key 2, GYM Limited has only taken into account costs up to December 2013. Whilst all of the Transmission Asset costs are expected to have been incurred up to December 2013, further £[REDACTED] millions of total Wind Farm costs are scheduled to be incurred during 2014, and are hence omitted from the calculation of Cost Allocation Key 2.
- 1.37 We do not consider that the calculation of Cost Allocation Key 2 is appropriate for the following reasons:
- 1.37.1 if considering total project cost, it should be on the whole period rather than just the time until the Transmission Assets are transferred. Therefore these costs should be allocated to the Transmission Assets based upon a percentage of total Wind Farm costs, and not just those up to December 2013

1.37.2 insurance costs are largely driven by capital costs, and therefore an allocation on this basis does not reflect the full capital cost of the generation assets

1.37.3 a number of areas have a high level of set up costs which are incurred early on during the period, thereby pushing more of the costs onto the Transmission Assets

1.37.4 by allocating on the basis of total expenditure including allocated cost, the allocation of cost can itself impact on the final allocation figure, creating a circularity of calculation and other cost allocations also impact on this.

COMPETITIVE TENDERING

1.38 As part of our initial analysis we were provided with documents which set out the criteria GYM Limited stated was to be used in their assessment of tenders received on a competitive tendering basis. In accordance with these, the expectation was for an assessment of tenders on a commercial basis, including price, commercial and technical compliance and project management. There was an indication of possible aggregation of contracts to achieve discounts. This appeared reasonable on a high level basis (details on specific criteria were not supplied).

1.39 We have now carried out an initial assessment of the actual tender documentation provided by GYM Limited in relation to the electrical systems contract for the Gwynt-y-Mor site. This is not a full review of the tender process which would be a significantly larger exercise and would require full access to the documentation (so far we only have a summary of the process). However based on our initial review we are unable to confirm whether

1.39.1 the processes used for elimination of bidders;

1.39.2 the methods used for rationalisation of prices and adjusting order of bids on that basis;
and

1.39.3 the way any discount was allocated between Transmission and Generation assets

were appropriate and, in the case of the first two points, were properly communicated to all bidders. This is particularly important when the winning bidder had become a shareholder shortly before the bid was awarded.

1.40 REDACTED AT DEVELOPER'S REQUEST

1.42 | 1.41 We note that the totals in the pricing schedule for fixed lump sums, provisional lump sums and time and materials based amounts were:

- REDACTED AT DEVELOPER'S REQUEST

1.43 | 1.42 These were then rationalised to reflect different approaches to significant time and materials costs, where GYM Limited applied a method of standardising the bids based upon hourly rates for time and materials stated by the two contractors, and on this basis the prices were:

- REDACTED AT DEVELOPER'S REQUEST

1.44 | 1.43 On this basis added to the remainder of the evaluation, Siemens were chosen as preferred bidder. Even if pricing aspects were removed from the bid, then on the base bid Siemens would have still been the preferred bidder (weighted score excluding pricing of [REDACTED] - v- [REDACTED] though a perceived higher risk was noted for that tender.

1.45 | 1.44 Finally we note that the decision was not announced immediately as it was being used in negotiations on turbine supply to negotiate a better price. There is no indication from what we have seen that any higher price was paid on the elements of the contract relating to transmission in order to obtain commercial advantage elsewhere. Our scope is restricted to the Transmission Assets, and consequently we have not obtained any confirmation from management on whether it obtained a lower price on generation. In any event it would not necessarily directly result in a higher transmission cost from that supplier. There is no indication from what we have seen elsewhere that a higher price was paid on transmission purely to obtain commercial advantage in other parts of the project.

CONCLUSIONS AND RECOMMENDATIONS

1.46 | 1.45 Save as referred to below we have been able to confirm, based on the information we currently have, that the costs contained in the latest cost template appear reasonable.

1.47 | 1.46 _____ However, whilst most of the areas of cost are clearly identified, the changes in cost allocation methodology and justification for those, the increases in project development costs (especially project management support costs) that cannot be clearly explained and the questions around contingencies mean that these areas (a total of 19.4% of total cost) cannot be fully confirmed, though the question is whether these are accurate, rather than that any would disappear completely.

1.48 | 1.47 _____ The uncertainty we note around the tendering processes used means that we are also unable to confirm if the Siemens tender that was accepted was the lowest/most appropriate achievable had the bidders been aware of the price normalisation method applied. The contract is for a sum in excess of £XXX million (exact amount depends on the tender review assumptions) though the difference between the two contracts would only be a relatively small percentage of the total cost of the Transmission Assets.

1.49 | 1.48 _____ Further details would need to be provided by GYM Limited for the items highlighted above that we would need to review in order to satisfy ourselves in these areas.

1.50 | 1.49 _____ On the basis of the concerns highlighted we would recommend that:

1.50.1 | 1.49.1 _____ GYM Limited be asked for further detail to justify why the 53.9% rate of staff time on transmission matters being used until December 2010 in calculating Cost Allocation Key 1 was appropriate (given the impact that the 2010 time allocations used in cost allocation key one have on the total cost and the lack of substantiation of the latest basis)

1.50.2 | 1.49.2 _____ GYM Limited amend Cost Allocation Key 2 for a more appropriate method to address the concerns highlighted in paragraph 1.37 unless it has further appropriate justification for the current basis.

1.50.3 | 1.49.3 _____ Ofgem determine whether it requires a more detailed analysis of the tendering processes in relation to the Electric Systems contract or more generally, including what discounts were obtained and how these discounts were allocated between transmission and generation

1.50.41.49.4 Ofgem confirm with its technical advisors whether contingency levels are considered to be at an appropriate level for the stage of development (including whether opportunities are fairly allocated and provision for a general unidentified contingency provision at this stage) and whether it is comfortable with the rationale for the levels of cost being incurred in respect of port facilities and staff transport vessels

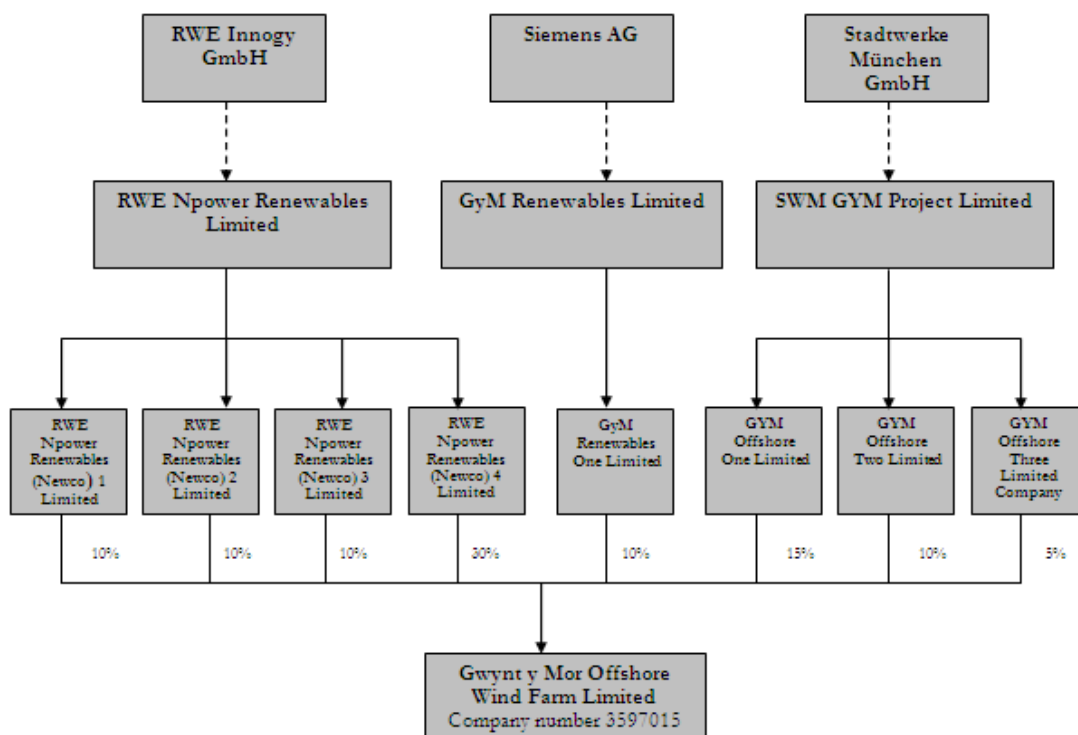
Grant Thornton UK LLP

London

2 AS AT 12 OCTOBER 2012 INTRODUCTION

BACKGROUND

- 2.1 As set out in our previous report, the Department of Energy and Climate Change granted consent to GYM Limited to build and operate Gwynt y Mor Offshore Wind Farm off the coast of North Wales. Consent was granted for a wind farm of up to 750 megawatts.
- 2.2 The Wind Farm is owned and financed by three shareholders under an Unincorporated Joint Venture through a limited company, GYM Limited. RWE Innogy holds a 60% stake in the joint venture, Stadtwerke Munchen 30% and Siemens 10%. All three shareholders are financing the project on their respective balance sheets. The project is being engineered, procured, constructed, operated and maintained by RWE Npower Renewables Ltd, a wholly owned subsidiary of RWE Innogy. The total investment amounts to more than €2 billion, including the grid connection to the coast. The investment will be divided between the partners accordingly.
- 2.3 The ownership structure (as per the Project Information Memorandum of the Wind Farm), which has remained unchanged since our previous report, is set out below⁵:



⁵ We note that the company number of Gwynt Y Mor Offshore Wind Farm Limited is in fact 3697015

- 2.4 The Wind Farm is being built in Liverpool Bay, spread across 79 square kilometres approximately 15 kilometres (9 miles) off the North Wales coast. Siemens are supplying, installing and maintaining the wind turbines, and providing the connection to the grid.
- 2.5 The project is forecast to generate around 1,950 gigawatt hours of electricity annually, enough to supply around 400,000 British households.
- 2.6 Siemens will supply, erect and maintain 160 wind turbines, each with a capacity of 3.6 megawatts. Siemens will also be responsible for connecting the wind turbines to the grid, which entails the delivery of two turnkey offshore transformer platforms. Using high-voltage sea cables, power will be transmitted to the Welsh town of St Asaph, from where it will connect to the National Grid system.
- 2.7 Once completed, the Wind Farm will have an installed capacity of 576 megawatts. Work has recently started on the foundations for the offshore works, and the Wind Farm is expected to be fully operational by the end of 2014.

INSTRUCTIONS

- 2.8 Grant Thornton have been instructed by Ofgem to prepare a report on our investigation of the cost information and the Latest Cost Template prepared for Ofgem by GYM Limited, for the Transmission Assets of the Gwynt y Mor Wind Farm.
- 2.9 The investigation is to understand whether the costs provided in GYM Limited's costs template can be matched to specific contracts or other supporting information and whether metrics exist for cost allocation between Transmission and Generation and involved checks against contract schedules, values and other supporting information that indicates how costs have been derived. The investigation also involved a site visit to GYM Limited's premises in order to discuss the information provided together with the basis for the cost allocation metrics used.
- 2.10 The purpose of a review at this stage is to:
- determine if GYM Limited's cost estimates required updating for the next stage of the transfer process, Qualification To Tender and ITT
 - aid technical identification 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 value for the ITT stage of the process

- assist determination of indicative value for ITT by reviewing accuracy, allocation and completeness of cost information.
- 2.11 The high level review we have conducted (the ex ante cost review) is based upon GYM Limited's current estimates of the costs to be incurred by the transmission business. To date, GYM Limited has prepared and submitted a number of cost templates to Ofgem of which we have seen six. We compare three of those: the Initial Cost Template; the Previous Cost Template; and the Latest Cost Template. This report is an updated version of a draft report dated 9 March 2011, reflecting significant changes in the development of the Wind Farm. Following construction of the Wind Farm, we will be carrying out a detailed forensic review of the actual expenditure incurred by the transmission business (the ex post cost review).
- 2.12 Grant Thornton's review of the ex ante cost assessment prepared by GYM Limited is limited to the scope as set out above and does not include detailed cost verification or any review of technical or legal issues.
- 2.13 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.
- 2.14 This work does not constitute an audit performed in accordance with Auditing Standards, but follows instructions agreed upon with Ofgem.
- 2.15 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.
- 2.16 The report may contain minor rounding adjustments due to the use of computers for preparing certain calculations.

RESTRICTION ON CIRCULATION

- 2.17 Grant Thornton UK LLP 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.

- 2.18 In the preparation of our report Grant Thornton UK LLP has been provided with material by Ofgem (and by third parties at Ofgem's request) relating to third parties in respect of which we have relied upon warranties and representations provided by Ofgem that Ofgem 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 UK LLP acknowledges 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

- 2.19 To the best of our knowledge, we have no connection with any of the parties or advisors involved in this case beyond normal commercial relationships which would not influence our report in any way.

FORMS OF REPORT

- 2.20 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 hard copy should be regarded as definitive.

3 DEVELOPER'S COST ALLOCATION AND TENDERING STRATEGY

- 3.1 We understand that a full budgeting process for the Wind Farm project was undertaken in May 2010, which was updated for cost estimates in September 2010. We understand that costs are now continuously monitored and are reported internally within GYM Limited on a monthly basis, including cashflows.

COMPETITIVE TENDERING

- 3.2 It is our understanding that GYM Limited entered into competitive tendering processes for the major parts of the Transmission Assets, in particular the contract that was ultimately awarded to Siemens for electrical systems. We have looked at the tender for the Siemens contract due to its size relative to the total cost of the Transmission Assets, and have not looked at tenders for other contracts.
- 3.3 During our earlier ex ante review of the Gwynt y Mor Transmission Assets, we were provided with documents which set out the criteria GYM Limited stated were to be used in its assessment of tenders received on a competitive tendering basis. In accordance with these, the expectation was that an assessment of tenders on a commercial basis, including price, commercial and technical compliance and project management. There was an indication of possible aggregation of contracts to achieve discounts. This appeared reasonable on a high level basis (details on criteria were not supplied).
- 3.4 GYM Limited has not provided us with copies of the actual tenders received, as it considers this information to be commercially sensitive and believe that Ofgem's technical advisors should have the requisite knowledge to determine whether the prices included within the cost template are in line with market rates. That is something which Kema may be able to confirm. However we have been provided with the tender assessment in respect of the contracts awarded to Siemens for offshore and onshore electrical works. We have carried out an initial assessment of this. This is not a full review of the process which would be a significantly larger exercise and would require full access to the documentation rather than only the summary. The facts we understand from that initial review are:

3.4.1 REDACTED AT DEVELOPER'S REQUEST

3.4.2 REDACTED AT DEVELOPER'S REQUEST

3.4.3 REDACTED AT DEVELOPER'S REQUEST

3.4.4 REDACTED AT DEVELOPER'S REQUEST

3.4.5 REDACTED AT DEVELOPER'S REQUEST

3.4.6 REDACTED AT DEVELOPER'S REQUEST

3.4.7 REDACTED AT DEVELOPER'S REQUEST

- 3.5 On the information that we have been provided with we cannot say whether the processes detailed above were appropriate or in line with the general outline provided previously. REDACTED AT DEVELOPER'S REQUEST. We do note however that a full review of tendering processes would be a lengthy and costly task and that the difference between bidders may not have been that significant as a percentage of the overall contract cost in any event.

RELATED PARTY TRANSACTIONS

- 3.6 Following the acquisition by Siemens of a 10% share in the value of GYM Limited on 2 June 2010, we were concerned that the value of contracts between GYM Limited and Siemens Transmission and Distribution Limited may contain an uplift in lieu of an income distribution. GYM Limited confirmed that there was no uplift in the contract. We note that the contract with Siemens was signed on 18 June 2010, and that GYM Limited had deemed this contract to have the lowest cost when provisional sums were taken into account. We are not able without further work to confirm if the methodology used to arrive at that was appropriate.

BOUNDARIES USED FOR PURPOSES OF COST ALLOCATION

- 3.7 The Preliminary Information Memorandum confirms the boundary points of the Transmission Assets as follows:
- offshore - located at the incoming transformer 33kV circuit breaker cable terminations on the two offshore substation platforms; ie the entire 33kV switchboard will be owned by the wind farm with the 33kV cable connections to the transformer, and upstream assets, owned by the Transmission Asset.

- onshore - located between the 400kV busbar disconnectors and the 400kV Transmission Asset circuit breaker; ie the 400kV busbars and busbar disconnectors will all be owned by National Grid Electricity Transmission (NGET).

3.8 We have not seen anything to suggest the latest cost template is inconsistent with these boundary points.

ALLOCATION OF COSTS

Previous cost allocation basis

Cost allocation key

3.9 GYM Limited initially allocated 13.14% of project management support services costs to the Transmission Asset on the basis that the estimated value of the Transmission Assets represented 13.14% of the total Wind Farm project. However, it was concerned that this allocation rate did not accurately reflect the costs/time spent by its staff on Transmission Assets.

3.10 On that basis, GYM Limited carried out a review of the amount of time that was expected to be undertaken by its own employees, contractors and by staff of other companies within the RWE Group in relation to the Transmission Assets, and applied those rates (which varied from 13.7% to 35.4%) to the equivalent categories within the total budget for project management support services costs.

3.11 It was not possible to allocate external legal fees and project management support services costs incurred prior to June 2010 upon actual time spent because no time recording records were available for this period. Therefore GYM Limited calculated a cost allocation key to apply in respect of these categories.

3.12 The previous cost allocation key prepared by GYM Limited was comprised of two elements:

Basis of allocation	Rate	Weighting	Weighted average rate
Percentage of Transmission Assets as a proportion of total Wind Farm costs	14.7%	0.67	9.8%
Percentage of project work packages attributable to the Transmission Assets as a proportion of total packages	43.3%	0.33	14.4%
Rate for allocation of costs to the Transmission Assets			24.2%

- 3.13 We considered that both elements of the cost allocation key were in line with standard cost accounting principles which consider alternative bases of allocation dependent upon issues such as capital value or costs generated by a particular activity, although this particular allocation assumed work packages of broadly equal size which we were unable to confirm without technical advisor confirmation.
- 3.14 This cost allocation key was applied to certain project management support services costs, miscellaneous development costs and technical support services costs, principally those where the work undertaken is time based Transmission Assets as a percentage of total Wind Farm costs.
- 3.15 Certain other costs were previously allocated to the Transmission Assets based upon the cost of the Transmission Assets as a percentage of the total Wind Farm costs which equated to 14.7%.
- 3.16 This cost allocation key was applied to certain project management support service costs, insurance costs, personnel transfer vessels costs, port leases and licences costs, port facilities/site establishment costs and offshore construction monitoring costs.

Revised cost allocation basis

- 3.17 GYM Limited has revised the basis for allocation of common project costs to the Transmission Assets, and has prepared two general cost allocation keys (there are other different keys applicable to certain individual costs).

Cost Allocation Key 1

- 3.18 Cost Allocation Key 1 has been calculated by reference to time spent on the Transmission Assets as a percentage of total time spent on the Wind Farm project as a whole, and has been applied to project management support services costs only. Cost Allocation Key 1 has been calculated on a month by month basis, resulting in the allocation of 24.4% of project management support services costs being allocated to the Transmission Assets.
- 3.19 Our specific comments in relation to the calculation of Cost Allocation Key 1 are set out in paragraphs 4.83 to 4.89.
- 3.20 As a large proportion of the project management support services costs relate to personnel costs, the allocation of these costs to the Transmission Assets on the basis of time spent on Transmission Assets appears reasonable and in line with standard cost accounting principles.

Cost Allocation Key 2

- 3.21 Cost Allocation Key 2 is the new name given to the previously used cost allocation basis based upon the cost of the Transmission Assets as a percentage of the total Wind Farm costs. However Cost Allocation Key 2 has been calculated at the higher rate of 19.9% as opposed to the previous rate of 14.7%.
- 3.22 The reasons for this higher rate and our specific comments in relation to the calculation of Cost Allocation Key 2 are set out in paragraphs 4.90 to 4.93.
- 3.23 Cost Allocation Key 2 has been applied to offshore geotechnical site investigation costs, personnel transfer vessels costs, port leases and licences costs, port facilities/site establishment costs, technical support services costs, miscellaneous development costs, offshore construction monitoring costs and insurance costs.
- 3.24 Aside from insurance costs, most of these costs are incurred in relation to work undertaken out at sea or in preparation for such works. This could be a reasonable method to allocate the costs, as much of the work out at sea is in relation to the generation side of the Wind Farm (installation of 160 turbines) as opposed to the Transmission Assets (two offshore platforms). However, depending on what the exact drivers for the costs are (eg if it is the number of monopiles or the actual area of sea floor involved) a different allocation method might be more appropriate and technical advice should be sought to confirm that.
- 3.25 The determination of insurance costs for the entire Wind Farm will be heavily weighted to the costs of equipment and installation. It therefore appears reasonable to allocate insurance costs on the basis of total Wind Farm costs.

4 THE GWYNT Y MOR WIND FARM EX ANTE REVIEW

4.1 The instructions and background to this assignment are set out in the Introduction in Section 2 above.

INFORMATION PROVIDED

4.2 Grant Thornton have relied upon the following information in reviewing the Latest Cost Template for the Transmission Assets of the Wind Farm:

- Preliminary Information Memorandum dated November 2010 prepared by RBC Capital Markets
- Information contained in the Ofgem developer data room for the Gwynt y Mor Wind Farm project
- Information and explanations provided to us by GYM Limited. This included a visit to GYM Limited on 20 December 2010 and subsequent telephone calls and emails to that, a conference call with GYM Limited on 5 September 2012 to discuss the revised cost template for the Transmission Assets, and further subsequent telephone calls and email correspondence with GYM Limited project managers.

EX ANTE REVIEW

4.3 The main purpose of the ex ante cost review of the Wind Farm's Transmission Assets is to determine whether the Latest Cost Template prepared by GYM Limited for the Transmission Assets is appropriately stated to use in Ofgem's cost assessment and whether costs not directly attributable to either the generation or transmission businesses have been allocated between the two on a reasonable basis.

4.4 An ex ante review of the costs of the Transmission Assets of the Wind Farm was carried out in early 2011 and our findings summarised in a draft report dated 9 March 2011. This updated review reflects that but in terms of new work has focussed upon those costs which have changed by more than £25,000.

4.5 The starting point in our updated review of the cost information provided was to compare the Latest Cost Template prepared by GYM Limited to the Previous Cost Template, in order to establish the significant changes. GYM Limited has uploaded supporting documentation and/or explanations for many items included within the cost template to the Ofgem data room.

- 4.6 Following this cost comparison, we provided GYM Limited with a list of questions which formed the basis of a discussion on 5 September 2012. These discussions had a particular focus on contingency and cost allocations. Since this discussion, GYM Limited has continued to provide us with further information and explanations.
- 4.7 Subject to the issues raised at paragraphs 4.99 to 4.109, 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 with 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. 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.
- 4.8 The figures in the tables set out below are those as stated in the Latest Cost Template. Unless explicitly stated, the figures included under each cost heading are taken from the corresponding page of the Latest Cost Template.
- 4.9 Our work shows an increase in costs of the Gwynt y Mor Wind Farm Transmission Assets as reflected in the Latest Cost Template to £[REDACTED] million, a total increase of £[REDACTED] million ([REDACTED]%) from the Initial Cost Template, and an increase of £[REDACTED] million ([REDACTED]%) from the Previous Cost Template as set out in the table below. These figures exclude interest during construction (IDC):

TABLE REDACTED AT DEVELOPER'S REQUEST

- 4.10 It is clear from our exchanges with GYM Limited on the reasons for some of the changes that it considers some of the initial budgeting to have been inaccurate. This is particularly evident in the transfer vessels and the project management support costs where there are material increases in costs. In an internal presentation, GYM Limited identified a number of drivers for the increase in these costs which include the multi-contracting of foundations installation and of other packages, an increase in the number of vessels and using a two port and related wind turbine generator installation vessel strategy. GYM Limited has made clear though that it considers a reconciliation to the original budgets is not feasible.

- 4.11 The most significant movements between the Previous Cost Template and the Latest Cost Template are the fall in contingencies of £[REDACTED] million, the increase in offshore vessels and marine costs of £[REDACTED] million⁶, the inclusion of a spare transformer for the offshore substation of £[REDACTED] million, an increase in project management support costs of £[REDACTED] million and a further increase in other development costs (particularly Port Facilities and Personnel Transfer Vessels) of £[REDACTED] million.
- 4.12 We have agreed a substantial proportion of the costs of the transmission business (68.4%) to the major contracts entered into between the Wind Farm and the subcontractors for the various packages. There is a further 7.3% allocated to contingencies and 6.5% to Project Management Support Services which are both discussed below. We have agreed other costs to contract options, variation orders, invoices or working schedules with underlying supporting documentation.
- 4.13 The Latest Cost Template for the Transmission Assets of the Wind Farm as at 3 August 2012, excluding interest during construction is summarised below:
- 4.14 As part of our original ex-ante review, we agreed a number of costs to contracts as follows:

TABLE REDACTED AT DEVELOPER'S REQUEST

Currently 68.4% of costs are specifically agreed to the main contracts.

Siemens contract

- 4.15 Included within the Latest Cost Template are costs of £[REDACTED] in respect of contract [REDACTED] between GYM Limited and Siemens Transmission and Distribution Limited dated 18 June 2010. This equates to the £[REDACTED] shown above. The original value of the contract was £[REDACTED], which was subsequently reduced to £[REDACTED] around the time of our last report. The latest estimate of costs payable under this contract including variations is £[REDACTED].
- 4.16 The latest estimate of costs payable under this contract including variations is £[REDACTED].

⁶ Being £[REDACTED] million within offshore substation costs and £[REDACTED] million within development costs

- 4.17 This contract is broken down into costs which are directly attributable to specific packages within the Wind Farm, costs for equipment/works which are allocated across specific packages and project management costs, site establishment expenses and discounts, also allocated across specific packages. Project management costs, site establishment expenses and discounts have been applied across the Transmission Assets based upon the proportion of the contract which relates to each element. We have reviewed the allocation of these costs and are satisfied that the costs have been calculated as stated.

Offshore substation

- 4.18 The Gwynt y Mor Offshore Wind Farm will have two offshore 33/132kV substations. The movement in offshore substation costs is as follows:

TABLE DELETED AT DEVELOPER'S REQUEST

Siemens contract

- 4.19 Contract [REDACTED] between GYM Limited and Siemens Transmission and Distribution Limited includes costs of £5 [REDACTED] in respect of the design and construction of the offshore substation, excluding supply of the substation jacket foundations. Further details of this contract are set out at paragraphs 4.15 to 4.16 above.

Burntisland Fabrications contract

- 4.20 Contract [REDACTED] between GYM Limited and Burntisland Fabrications Limited dated [REDACTED] 2010 has a value of £ [REDACTED], and is for the design, fabrication, testing and supply of two offshore platform jacket foundations. We have agreed the value of this contract to the Latest Cost Template.
- 4.21 The Latest Cost Template also includes options and variations under this contract of £ [REDACTED] giving a revised value of £ [REDACTED]. We have agreed £ [REDACTED] to underlying variation orders (including a site change request and additional weight variation), including all variations in excess of £ [REDACTED]

Seaway Heavy Lifting Contracting contract 1 – offshore substation platform topsides

- 4.22 A contract dated [REDACTED] between GYM Limited and Seaway Heavy Lifting Contracting Limited has a value of £ [REDACTED] and is for marine transportation and installation of offshore substation platform topsides.
- 4.23 The Latest Cost Template includes an amount of £ [REDACTED] in relation to the cost of an additional barge, a tax adjustment of £ [REDACTED], and vessel investigation costs of £ [REDACTED]. We have been advised that the additional barge costs and tax adjustment are GYM Limited's best estimates based upon current discussions with the contractor.

Seaway Heavy Lifting Contracting contract 2 – offshore substation jacket

- 4.24 In the Previous Cost Template, the costs of transporting and installing the substation foundation jackets was included under two headings, and was scheduled to be transported using the Seabreeze II. Since the Previous Cost Template, GYM Limited has entered into a contract with Seaway Heavy Lifting Contract for the transportation and installation of monopiles and the offshore substation foundation jackets.
- 4.25 The Latest Cost Template includes an amount of £[REDACTED] in relation to the costs for transportation and installation of the offshore substation foundation jackets.
- 4.26 Contract [REDACTED] for €[REDACTED] relates to the installation of monopoles and the offshore substation jackets. Contract amounts in relation to the offshore substation jackets amount to €[REDACTED]. The Latest Cost Template also includes variations totalling €[REDACTED] £[REDACTED] and a standby provision of €[REDACTED]. The standby provision was GYM Limited's best estimate of the standby costs that would be payable under this contract, and we have been provided with workings for this amount.

Geotechnical site investigations

- 4.27 The costs for the offshore substation include an amount in respect of the costs of geotechnical site investigations. GYM Limited previously allocated costs to the Transmission Assets at a rate of 14.7%, using the allocation rate based upon the value of Transmission Assets as a percentage of the total Wind Farm project costs. GYM Limited has now allocated these costs to the Transmission Assets using Cost Allocation Key 2, resulting in an increase in the geotechnical site investigation costs allocated to the Transmission Assets to £[REDACTED]. The appropriateness of this Cost Allocation Key is considered at paragraphs 3.21 to 3.25.

Submarine cable supply and installation

- 4.28 Array cables will be installed to take the electricity from the wind turbines to the two offshore electrical substations, and export cables will transport the power onwards from the offshore substations to underground transition pits on the shore. It is the export cables which form part of the Transmission Assets.
- 4.29 The movement in submarine cable supply and installation costs is as follows:

TABLE DELETED AT DEVELOPER'S REQUEST

NKT Cables contract

- 4.30 The NKT Cables contract for the design, manufacture and supply of the submarine cables has now been largely completed, and the final statement of account dated [REDACTED] amounted to £ [REDACTED]. The contract dated [REDACTED] 2010 between GYM Limited and NKT cables GmbH had a prior value of £ [REDACTED]. This contract was for the design, manufacture and supply of four subsea power and optical fibre composite 132kV 500mm² export cables - two for 19.1 km and two for 22.5 km. The total original price plus options in the contract amounted to £ [REDACTED]. However, as the enhanced cabling option was being used in this contract this increased the value to £ [REDACTED], which agreed to the value included in the Previous Cost Template. The enhanced cabling option, which had a value of £ [REDACTED], includes 20% PE armouring and 80% steel armouring of the last 400 metres of each cable for storage on the cable turntable.
- 4.31 The overall price has now dropped to the £ [REDACTED] indicated above. However, we are advised by GYM Limited that there are some costs that are yet to be agreed upon. As such it has left a contingency within this contract amounting to £ [REDACTED].

Global Marine Systems contract

- 4.32 The contract between GYM Limited and Global Marine Systems Limited dated [REDACTED] 2011[sic] is for the laying of export cables. It initially had a value of £ [REDACTED]. Following a number of variations, the contract amount has now been revised to £ [REDACTED] based upon variation [REDACTED]. The Latest Cost Template includes an amount of £ [REDACTED] for the laying of export cables, £ [REDACTED] greater than the contract value. The difference comprises:
- 4.32.1 target price adjustment of £ [REDACTED] (see paragraph 4.33)
 - 4.32.2 weather contingency within this contract of £ [REDACTED] (see paragraph 4.34)
 - 4.32.3 mattress installation costs of £ [REDACTED]
 - 4.32.4 rock placement costs of £ [REDACTED]
 - 4.32.5 support costs of £ [REDACTED]
 - 4.32.6 revised outfall solution costs of £ [REDACTED].

- 4.33 Included within the contract value of £[REDACTED] million is an amount of £[REDACTED] for "Tranche-Vessel Operational Activities". This is the cost of the vessels required in order to deliver and install the submarine cables. The amount of £[REDACTED] million (previously £[REDACTED] million) is an estimate of the actual cost of using the vessels in operational periods. The contract includes a clause which requires GYM Limited to pay up to an additional [REDACTED] % for the cost of the vessels, which may require the Wind Farm to make additional payments up to £[REDACTED]. However, the Latest Cost Template only includes a sum of £[REDACTED] in respect of these payments ([REDACTED] % of the £[REDACTED] million). This is based upon GYM Limited's expectation of the amount which it is expecting to pay under this clause.
- 4.34 GYM Limited has estimated that it will incur costs under this contract as a result of non-operational periods totalling £[REDACTED]. It estimates that there will be [REDACTED] non-operational days as a result of bad weather, at an amount of £[REDACTED] per day amounting to £[REDACTED] (previously it was [REDACTED] days at £[REDACTED] per day). However contingencies are removed from this amount to provide the total stated above of £[REDACTED].

Osiris Hydrographic & Geophysical Projects contract

- 4.35 GYM Limited has contracted with Osiris Hydrographic & Geophysical Projects Limited for array cable and offshore export cable geotechnical and geophysical site investigation. Amounts payable to Osiris amount to £[REDACTED], and £[REDACTED] of these costs have been allocated to the Transmission Assets, representing 100% of the costs of the cable route survey and geotechnical investigation, and 50% of the costs of the UXO geophysical survey.
- 4.36 GYM Limited has advised us that the significant increase in these costs from the Previous Cost Template (£[REDACTED]) relates to significant scope increases in order to firm up the cable installation and aligning to foundation requirements.

Land cable supply and installation

- 4.37 Approximately 11 km of underground power cables will be installed to connect the Wind Farm from the beach landing point to the new electricity substation at St Asaph. By burying the onshore power cables underground the need for additional planning consent (which may cause project delays) on the overhead power lines is avoided.
- 4.38 The movement in land cable supply and installation costs is as follows:

TABLE DELETED AT DEVELOPER'S REQUEST

Prysmian Cables and Systems contract

- 4.39 The contract dated [REDACTED] 2010 between GYM Limited and Prysmian Cables and Systems Limited has a value of £[REDACTED]. The contract is in relation to onshore 132kV export cable supply and installation works. Additions to the contract value, which total £[REDACTED] comprise:
- 4.39.1 An option for a distributed temperature system of £[REDACTED] which has been agreed to options within the overall contract.
- 4.39.2 "Compensation Events" totalling £[REDACTED], which have been agreed to notifications
- 4.39.3 "Project Manager's Instructions" totalling £[REDACTED] of which £[REDACTED] have been agreed to notifications or calculations
- 4.39.4 "Early Warning Notices" of £[REDACTED] have been added to the contract amount. We understand that GYM Limited are in the process of agreeing these costs with the subcontractor, and that these amounts are its best estimate of the costs involved.
- 4.40 There is a difference between the amount for land cable costs within the cost template of £[REDACTED] and the breakdown of land cable costs provided to us of £[REDACTED], amounting to £[REDACTED]. We are advised by GYM Limited that this is the contingency remaining within the package to cover a number of small items which have yet to be finalised.

Osiris Hydrographic & Geophysical Projects contract

- 4.41 Contract [REDACTED], which is undated, between GYM Limited and Osiris Hydrographic & Geophysical Projects Limited had a value of £[REDACTED]. The contract is for array cable and offshore export cable geotechnical and geophysical site investigation.
- 4.42 However the Latest Cost Template has included a reduced amount of £[REDACTED] in relation to these costs.

Jones Bros Ruthin contract

- 4.43 Contract [REDACTED] dated [REDACTED] 2010 between GYM Limited and Jones Bros Ruthin (Civil Engineering) Co Ltd has a contract value of £[REDACTED] and relates to the construction of a substation and associated works. As a result of variation orders, the total amount payable under this contract is £[REDACTED], which we have agreed to a payment certificate, and this amount is reflected in the Previous Cost Template

Wales and West Utilities contract

- 4.44 The site of the onshore substation was constrained by a high pressure gas pipeline, which needed to be diverted away from the substation for safety reasons. This work was undertaken by Wales and West Utilities Limited. We have reviewed invoice [REDACTED] dated [REDACTED] 2008, and invoice [REDACTED] dated [REDACTED] for £XXX. The total amount of these two invoices is £[REDACTED] and this amount is reflected in the Previous Cost Template.

Onshore substation

- 4.45 A 132/400KV electricity substation will be constructed at St Asaph Business Park, Denbighshire, North Wales. This will convert the electricity into the voltage required for the National Grid. A short section of around 500 metres of overhead power line will transfer electricity from the substation to the National Grid. This will not form part of the Transmission Asset and will be owned by National Grid. The substation was deliberately located close to the existing National Grid transmission lines to minimise the requirement for lengthy overhead power lines.

4.46 The movement in onshore substation costs is as follows:

TABLE DELETED AT DEVELOPER'S REQUEST

Siemens contract

4.47 Contract [REDACTED] between GYM Limited and Siemens Transmission and Distribution Limited includes costs of £[REDACTED] (previously £[REDACTED] in respect of the construction of the onshore substation. Further details of this contract are set out at paragraphs 4.15 to 4.16 above.

NGET unlicensed work

4.48 Contract [REDACTED] between GYM Limited and National Grid Electricity Transmission plc dated [REDACTED] 2010 has a contract value of £[REDACTED]. Additions to the contract value, which total £[REDACTED], comprise

4.48.1 Variations totalling £[REDACTED] which we have agreed to the variation orders

4.48.2 Contingencies totalling £[REDACTED] - REDACTED AT DEVELOPER'S REQUEST. This amount is separate to the contingency provision at paragraph 4.71, and is GYM Limited's best estimate of the amount due.

4.49 We understand from GYM Limited that these costs were not procured competitively. We have been told that this is because the design of the GIS bays is such that it is practicable for only the substation contractor to carry out the generator bay work, otherwise there will be interfacing and warranty issues.

Reactive substation

4.50 The Latest Cost Template includes a sum of £[REDACTED] (previously £[REDACTED] for the costs of the reactive substation. These costs entirety relate to contract NRL07822 between GYM Limited and Siemens Transmission and Distribution Limited. Further details of this contract are set out at paragraphs 4.15 to 4.16 above.

Connection costs

4.51 The Latest Cost Template for the Wind Farm currently does not include any amounts within the connection costs tab for the costs of connecting to the National Grid at the onshore substation and the cost payable to Ofgem for entering into the OFTO process. These costs are reflected within the cost categories for onshore substation and development costs respectively.

Development costs

4.52 The movement in Development costs is as follows:

TABLE DELETED AT DEVELOPER'S REQUEST

Project management support services

4.53 The Latest Cost Template includes a provision for project management support services costs of £[REDACTED], representing an increase from the Previous Cost Template of £[REDACTED].

4.54 Budgeted project management support services costs during the period of construction amount to £[REDACTED], and these costs have been allocated to the Transmission Assets at a rate of 24.4% based upon Cost Allocation Key 1. We comment upon the appropriateness of the allocation rate at paragraphs 3.18 to 3.20, and the calculation of the allocation rate at paragraphs 4.83 to 4.89 below.

4.55 Since the time of the Previous Cost Template, there has been an increase in total project management support services costs of approximately £[REDACTED] million. We held a discussion with GYM Limited in relation to these cost increases. GYM Limited has advised us that the number of personnel involved in the Wind Farm project has substantially increased from that anticipated at the time of our previous review, and it has provided us with organograms of the Wind Farm staffing structure at May 2010 and at July 2012 in support of this increase.

4.56 Whilst it is clear from the organogram that there has been a substantial increase in staff numbers, the cost impact of this increase cannot be substantiated. GYM Limited has provided a presentation for their shareholders on the changes. However, whilst that shows various staffing differences and highlights a few key drivers, it does not quantify what the impact of any of those drivers has been, even at a broad level.

4.57 In the absence of such a quantification, we are unable to substantiate the increase in project management support services costs at this time. However we recognise that at the time of the ex post cost review, all costs will be capable of substantiation.

Land transactions

4.58 Land transaction costs are comprised as follows:

- 4.59 We had previously agreed payments to landowners to a breakdown of invoices by transaction. The previous land transaction costs included an amount of £[REDACTED] in respect of sea defence wall easement costs. However this cost is now held within contingency, and is significantly lower than previously expected at £[REDACTED]. Overall costs (even after deducting the £[REDACTED] have fallen by £[REDACTED] from the Previous Cost Template.

Parent company guarantee costs

- 4.60 The Latest Cost Template includes an amount of £[REDACTED] in relation to the costs payable to GYM Limited for acting as guarantor in a number of contracts relating to the Transmission Assets. These costs are calculated at [REDACTED] % on a reducing balance basis.
- 4.61 We had previously advised of an overstatement in the parent company guarantee costs as a result of all costs payable on the total value of the Siemens contract (including generation related costs) being applied to the Transmission Assets. GYM Limited has amended its calculation such that only 80% of the parent company guarantee costs payable under the Siemens contract are allocated to the Transmission Assets. This allocation appears reasonable given that approximately 80% of the value of the Siemens contract is attributable to the Transmission Assets. Overall such costs have reduced from £[REDACTED] to £[REDACTED]

All other costs

- 4.62 The Latest Cost Template includes amounts in respect of personnel transfer vessel costs (£[REDACTED]), port leases and licences costs (£[REDACTED]), port facilities/site establishment costs (£[REDACTED]) and offshore construction monitoring costs (£[REDACTED]). These costs had previously been allocated to the Transmission Assets at a rate of 24.2%, based upon the cost allocation key detailed at paragraphs 3.12 to 3.16.
- 4.63 These costs have now been allocated to the Transmission Assets at the rate of 19.9% of budgeted costs in the period January 2009 to December 2013 using Cost Allocation Key 2. We comment upon the appropriateness of the allocation rate at paragraphs 3.21 to 3.25, and the calculation of the allocation rate at paragraphs 4.91 to 4.93.

- 4.64 There has been a material increase in the amount of personnel transfer vessel costs and port facilities/site establishment costs allocated to the Transmission Assets (██████ % and ██████ % respectively). Whilst a proportion of these increases is attributable to the change in cost allocation bases, total costs for personnel transfer vessels have increased from approximately £million to £million and total costs for port facilities/site establishment have increased from approximately £██████ million to £██████ million.
- 4.65 We held a discussion with GYM Limited in respect of these cost increases. GYM Limited stated that there has been an increase in the number of personnel transfer vessels required which has been one of the drivers for the cost increase. However, it has also stated that the budgeting exercise that it has undertaken in relation to these areas has been more comprehensive than had been the case in December 2010 and as such it believes that the budgets for these costs areas are realistic.
- 4.66 We consider that the assessment of the number of personnel transfer vessels required together with the extent of port facilities/site establishment is outside our area of expertise, and that technical assistance would be required to confirm the reasonableness of the assumptions used in the budgets for these costs. On that basis, whilst we are able to say that the costs for personnel transfer vessels and port facilities/site establishment are calculated in line with the cost allocation strategy stated by GYM Limited, we cannot say whether the amounts which form the basis for these costs are correct.
- 4.67 The Latest Cost Template includes an amount of £██████ for insurance costs (previously £██████ but pending revised costs as at the date of our earlier report), which have also been allocated to the Transmission Assets at the rate of 19.9% of budgeted costs in the period January 2009 to December 2013 using Cost Allocation Key 2. We comment upon the appropriateness of the allocation rate for these costs at paragraphs 3.21 to 3.25, and the calculation of the allocation rate at paragraphs 4.90 to 4.93.
- 4.68 The Latest Cost Template also includes amounts in respect of miscellaneous development costs (£██████) and technical support services (£██████). These costs had previously been allocated to the Transmission Assets at a rate of 24.2%, based upon the cost allocation key detailed at paragraphs 3.11 to 3.14 above. These costs have now been allocated to the Transmission Assets at a rate of 19.9% of budgeted costs in the period January 2009 to December 2013, using Cost Allocation Key 2, save for the Corus gas pipeline material supply which has been wholly allocated to the Transmission Assets.

- 4.69 The Latest Cost Template includes amounts in respect of onshore construction monitoring (£■■■■■), onshore consent monitoring (£■■■■■) and OFTO process costs (£■■■■■). These costs are based upon the budgets within each area, and are allocated entirely to the Transmission Assets. Given that all onshore works and OFTO costs relate to the Transmission Assets, this appears reasonable.
- 4.70 We note that onshore consent monitoring costs have fallen by £■■■■■, as a result of any costs being incurred post December 2013 being allocated to the non-transmission assets. GYM Limited has advised that it has only allocated costs to the end of 2013 in line with the handover.

Contingencies

4.71 The contingency provision included in the Latest Cost Template stands at £ [REDACTED] ([REDACTED] % of the pre-contingency pre-finance cost assessment). The current position, prior position and percentage change are as follows:

TABLE DELETED AT DEVELOPER'S REQUEST

4.72 The risk based contingency provision has been calculated based upon an assessment of the risks applicable to the Transmission Assets. The risk register for the Wind Farm project as a whole is extensive and runs to over 300 separate risks. We comment on the accuracy or otherwise of this key in paragraphs 4.79 to 4.81

4.73 The assessment of costs for each potential risk which the Wind Farm may face has been carried out as follows:

- an assessment is made on the possible consequences arising as a result of the event occurring;
- further assessment is made of the lowest, most probable and highest cost which would arise as a result of the event occurring;
- the probability of each event happening is assessed, and the weighted cost impact is determined. The weighted cost impact is based upon the total of the lowest price, four times the most probable price and the highest price, all divided by six.
- the weighted average cost is multiplied by the probability of each event happening; and
- an assessment is made of the total of the cost attributable to the Transmission Asset to establish the final transmission weighted cost impact.

4.74 The amount of contingencies has dropped by 48.3% from the provision included in the Previous Cost Template of £ [REDACTED] million and is reflective of the fact that the Wind Farm is now under construction and that there is a much greater degree of certainty regarding costs. In particular the contingency provisions for substations and grid connection costs have fallen by £ [REDACTED] million. However there have been corresponding cost increases within offshore costs of £million. Contingencies have also gone up in certain areas (cross project activities, port and infrastructure, unidentified contingency) and decreased significantly less than the average in subsea cables.

- 4.75 The table below summarises the overall movement in the main cost areas taking into account both changes in actual allocated cost and allocated contingency:

TABLE DELETED AT DEVELOPER'S REQUEST

- 4.76 We would generally expect to see the level of contingencies drop during a project with the level of hard costs rising, but by less than contingencies drop so that there is an overall drop in cost. That has not been the case here. We do note however that that is not always the case and given that there is limited experience of offshore windfarms certain elements may simply have been mis-estimated or have taken longer than expected to carry out.
- 4.77 The Latest Cost Template has also included a reduction in the overall contingency provision of £ [REDACTED], to provide for the possibility of potential cost saving opportunities within the Wind Farm project.
- 4.78 The contingency provision also includes an amount of "Unidentified Contingency" with a total of £ [REDACTED] million and represents 2% of total Transmission Assets capital expenditure. We note that 2% of total Transmission Assets capital expenditure excluding contingency amounts to £ [REDACTED] million. Having a general contingency amount is normal practice. However, we note that here this is in addition to specific contingencies identified, that in absolute terms it has gone up as the project has progressed and price has increased and that it has the effect of boosting the guaranteed minimum amount upon transfer. Ofgem may feel that this is not appropriate.
- 4.79 We have been provided with a copy of the risk register, including the schedule of opportunities, which details the specific risks for each of the areas included in the table above, and have reviewed the types of risks included on the risk register.
- 4.79.1 The risk register contains a number of items where the allocation to the Transmission Assets is at 45%, and also a number of items where the allocation to the Transmission Assets is 14% or 16%. These allocations were based upon previous allocation rates, and those items allocated at 45% should have been based upon Cost Allocation Key 2, whereas items allocated at 14% or 16% should have been allocated based upon Cost Allocation Key 1. We note that the reduction in contingency to items previously allocated at 45% is largely cancelled out by the increase in contingency of items previously allocated at 14 and 16%.

- 4.79.2 The schedule of opportunities contains four items⁷ with a total value of £[REDACTED] which are currently allocated to the generation assets only, but where based upon the descriptions within the opportunities register an allocation to the Transmission Assets using Cost Allocation Key 2 may be required. GYM Limited has advised us it expects the savings to fall for these opportunities, but has conceded that these opportunities may be allocated based upon the allocation key. We note that if these opportunities were to be allocated to the Transmission Assets using Cost Allocation Key 2 of 19.9%, we would expect a reduction in the value of the contingencies provision of approximately £[REDACTED]
- 4.80 We have looked at the assessment of the amounts in relation to the lowest, most probable and highest possible costs payable in the event that the risk actually occurs. We have also looked at the assessments of the likelihood of each event occurring. There are no amounts which immediately stand out as being of concern.
- 4.81 However, we consider that the assessment of these amounts and probabilities is outside our area of expertise, and that technical assistance would be required to fully confirm the reasonableness of "lowest", "most probable" and "high" costs payable in the event that the risk actually occurs as well as the assessments of the likelihood of each event occurring. On that basis, whilst we are able to say that the contingency provision has been calculated in line with the policy stated by GYM Limited, we cannot say whether these amounts which form the basis for the contingency provision are correct.

FINANCE COSTS

- 4.82 The Latest Cost Template includes developer nominal pre tax interest annual rate charge of 8.5% which is applied 1/12 each month on a compounded basis including all expenditure for that month as if already incurred on the first day of such month ie each month interest is charged at 8.5% for a full month on the prior month's closing balance plus any expenditure for that month. The expenditure and interest for that month, (less the 75% repayment of indicative value when transfer occurs) are all added to the prior month's closing balance to make the new closing balance. The developers interest costs for the Wind Farm total £[REDACTED] an increase of £[REDACTED] million on the what was in the Previous Cost Template. We note this but do not specifically consider Interest During Construction as part of this report.

⁷ ID's 16, 17, 19 and 24

ALLOCATION OF SHARED SERVICE COSTS AND OVERHEADS

- 4.83 As detailed in section 3 to this report, GYM Limited has allocated common costs to the Transmission Assets using two methods referred to as Cost Allocation Key 1 and Cost Allocation Key 2.
- 4.84 We have reviewed the appropriateness of these allocations in paragraphs 3.18 to 3.25 above, and detail our findings in relation to the calculation of the allocation keys below:

Cost Allocation Key 1

- 4.85 Cost Allocation Key 1 has been calculated based upon time spent by staff engaged on the Wind Farm project as a whole. In the period since December 2010, GYM Limited has asked staff engaged on the Wind Farm project to provide a monthly estimation of the time spent on Transmission Assets related work as a percentage of their total hours. The percentage is then applied to the relevant costs that have been incurred, or are budgeted to be incurred each month. However for the period between January 2009 and November 2010, no data was available regarding the proportion of time spent by employees on the Transmission Assets. In the absence of such data, GYM Limited allocated costs to the Transmission Assets during this period using the same rate applied for December 2010 of 53.9%, and as a result in the period to the end of November 2010, project managements support services costs of £ [REDACTED] were allocated to the Transmission Assets.
- 4.86 We asked GYM Limited to provide an explanation as to why it considered that it was appropriate to apply the rate of 53.9% to project management support services costs during this period. GYM Limited advised us that:

"...the organogram from May 2010 illustrates that more roles were directly OFTO related than directly non-OFTO related. Moreover, it can be confirmed that many or most of the numerous shared roles were heavily focussed on OFTO assets, as the project needed to satisfy OFTO transitional tender round entry criteria and consequently various OFTO contracts and assets were prioritised over generations assets. Even though it is difficult to justify any specific allocation percentage, it seems to be justified to allocate in excess of 50% of pre December 2010 project management time to OFTO assets".

- 4.87 Whilst we can see that there may be reasons for such a basis of allocation, we cannot confirm this on the basis of a GYM Limited's explanation alone, and as such we consider that further substantiation is required to evidence the rate of Cost Allocation Key 1 in this period.
- 4.88 As part of our previous review, a schedule provided support of the project management support services costs included monthly estimations of the proportion of time spent on Transmission Assets in the period from June 2010 to December 2011 of between 34.0% and 34.5%. However we also note that the average of Cost Allocation Key 1 in the period January to June 2010 is 46.6%, supportive of the assertion that a large proportion of work in this period was spent on the Transmission Assets.
- 4.89 For illustrative purposes only, we note that if a rate of 40% were to be applied to costs in this period, the amount of project management support services costs allocated to the Transmission Assets would fall by approximately £[REDACTED] million.

Cost Allocation Key 2

- 4.90 Cost Allocation Key 2 has been calculated based upon the cost of the Transmission Assets as a percentage of total Wind Farm costs, and has been calculated as 19.9%.
- 4.91 The Previous Cost Template included a number of costs that had been allocated using the same basis, but had a rate of 14.7%. The difference between the two rates has been caused at least in part by GYM Limited changing its calculation, such as not counting expenditure after handover of the Transmission Assets in December 2013. Significant expenditure is expected to be incurred in relation to the generation assets during 2014, notably wind turbine costs of £[REDACTED] million and as such this has increased the weighting of costs that have been allocated to the Transmission Assets.
- 4.92 We do not consider that calculation of Cost Allocation Key 2 is appropriate for the following reasons:
- 4.92.1 offshore geotechnical site investigation costs, miscellaneous development costs and offshore construction monitoring costs are costs that are incurred towards the start of the project. Therefore any allocation of costs in these categories should be based upon total Wind Farm costs, and as such should include those costs incurred beyond December 2013.

- 4.92.2 insurance costs are largely driven by the capital cost of the project, and therefore any allocation of insurance costs should take into account the total capital value of the Wind Farm, and not just the capital expenditure up to December 2013.
- 4.92.3 port leases and licence costs, port facilities/site establishment costs and technical support services costs all have a level of set up costs which are payable at the start of the works. Technical advisor assistance may be required to confirm if these are appropriate.
- 4.92.4 the allocation percentage is calculated by considering total expenditure including allocated cost. This means that the higher the percentage allocated under one or more of the different allocation keys, the higher the percentage of overall cost that is allocated to transmission and therefore the higher the percentage under cost allocation 2. This is a circular calculation which has been avoided by putting in a hard-coded number. There are alternatives that could avoid this, either ignoring all allocated numbers completely or only including those where the calculation of what percentage to allocate is on a different basis so that there is no circularity.
- 4.93 For indicative purposes, we have performed a recalculation of Cost Allocation Key 2, which we consider should be no more than 16.52%, which may in turn result in a reduction of costs allocated to the Transmission Assets of approximately £[REDACTED] million. This is before any adjustment as a result of not including allocated costs.

APPLICATION OF OVERRIDING GLOBAL DISCOUNTS

- 4.94 Written confirmation is to be obtained by Ofgem that any overriding benefits of preferential terms that any of the shareholders in GYM Limited receives or GYM Limited receives on other work with the same contractor or a related party of such contractor have been applied to the contracts negotiated with suppliers. The essence of this is to ensure that no worse terms are being applied on this asset as compared to the generation assets in particular.

EXPOSURE TO FOREIGN EXCHANGE VARIANCES

- 4.95 We understand that the Wind Farm project is funded in multiple currencies by the partners in the unincorporated joint venture. No specific forward exchange contracts have been entered into in respect of the Transmission Assets.

- 4.96 The Latest Cost Template includes approximately € [REDACTED] million of costs denominated in Euros (up from € [REDACTED] million in the Previous Cost Template). These amounts have been converted into Sterling using the monthly rate from the European Central Bank from January 2009 to June 2012, and at the June 2012 rate thereafter. The equivalent Sterling value in the Latest Cost Template is approximately £ [REDACTED] million, equivalent to a rate of € [REDACTED] :£1.00 over the course of the project

REDUNDANCY

- 4.97 According to the Project Information Memorandum, the Wind Farm has four export cables and four offshore transformers, two onshore transformers and two 400kV connection points; hence if a fault occurs on one of the export cables, or associated transformers, then the electrical energy can be re-routed. However, the total energy exported will be constrained by the rating of the remaining export cables or transformer.

SUMMARY OF ISSUES ARISING

- 4.98 Our review of the Latest Cost Template has highlighted issues in the following areas:

Increase in project management support services costs

- 4.99 As set out at paragraphs 4.53 to 4.57, there has been a substantial increase in the amount of total project management support services costs. GYM Limited has advised us that there has been a large increase in the numbers of personnel involved in the contract, as evidenced by its latest project organogram. However GYM Limited has been unable to provide us with an approximate quantification for the main increases in costs. As such we are unable to substantiate the increase in project management support services costs at this time. We recognise that at the time of the ex post cost review, all costs will be capable of substantiation.

Cost allocation calculations

- 4.100 GYM Limited has revised its cost allocation methods in the Latest Cost Template, and now has two distinct allocation keys:

4.100.1 Cost Allocation Key 1 allocates costs on the basis of time spent by staff on the Transmission Assets

4.100.2 Cost Allocation Key 2 allocates costs on the basis of Transmission Assets costs as a percentage of total Wind Farm costs.

4.101 Whilst we are satisfied that the methodology behind these two cost allocation bases is in line with standard cost accounting principles, we have issues in respect of the underlying calculations of these cost allocation keys.

Cost Allocation Key 1

4.102 No information was available to GYM Limited in relation to the amount of time its staff spent on the Transmission Assets prior to December 2010. GYM Limited has therefore decided that all costs that are allocated using Cost Allocation Key 1 prior to December 2010 will use the same allocation percentage as for December 2010 of 53.9%.

4.103 As a result, project management support services costs of £[REDACTED] are included within the Transmission Assets costs from January 2009 to November 2010. GYM Limited believes that its decision to allocate these costs to the Transmission Assets is justified because many of the shared roles were heavily focused on the Transmission Assets during this period as the project needed to satisfy OFTO transitional tender round entry criteria, and as such contracts for the Transmission Assets were prioritised over generation contracts during this period.

4.104 Whilst we can see that there may be anecdotal reasons for such a basis of allocation, we are unable to confirm this on the basis of GYM Limited's explanation alone, and as such consider that further substantiation is required to evidence the allocation rate in this period.

4.105 For illustrative purposes, we have noted that if the cost allocation rate were to be reduced to 40% over this period, the amount of costs allocated to the Transmission Assets would fall by approximately £[REDACTED] million.

Cost Allocation Key 2

4.106 In its calculation of Cost Allocation Key 2, GYM Limited has only taken into account costs up to December 2013. Whilst all of the Transmission Asset costs are expected to have been incurred up to December 2013, a further £[REDACTED] million of total Wind Farm costs are scheduled to be incurred during 2014, and are hence omitted from the calculation of Cost Allocation Key 2.

4.107 We do not consider that the calculation of Cost Allocation Key 2 is appropriate for the following reasons:

4.107.1 offshore geotechnical site investigation costs, miscellaneous development costs and offshore construction monitoring costs are costs that are incurred towards the start of the project. Therefore any allocation of costs in these categories should be based upon total Wind Farm costs, and as such should include those costs incurred beyond December 2013.

4.107.2 insurance costs are largely driven by the capital cost of the project, and therefore any allocation of insurance costs should take into account the total capital value of the Wind Farm, and not just the capital expenditure up to December 2013.

4.107.3 port leases and licence costs, port facilities/site establishment costs and technical support services costs all have a level of set up costs which are payable at the start of the works. Technical advisor assistance may be required to confirm if these are appropriate.

4.107.4 the allocation percentage is calculated by considering total expenditure including allocated cost. This means that the higher the percentage allocated under one or more of the different allocation keys, the higher the percentage of overall cost that is allocated to transmission and therefore the higher the percentage under cost allocation 2. This is a circular calculation which has been avoided by putting in a hard-coded number. There are alternatives that could avoid this, either ignoring all allocated numbers completely or only including those where the calculation of what percentage to allocate is on a different basis so that there is no circularity.

4.108 For illustrative purposes, we performed a recalculation of Cost Allocation Key 2, which resulted in a reduction to 16.52%. This in turn would result in a reduction in costs allocated to the Transmission Assets of £[REDACTED] million

Technical assistance

4.109 We consider that technical assistance is required in relation to the following cost items:

4.109.1 assessment of the amounts and probabilities in relation to the contingency provision (see paragraph 4.81)

4.109.2 extent of port facilities/site establishment requirements (see paragraph 4.66)

4.109.3 number of personnel transfer vehicles required (see paragraph 4.66)

IMPACT OF COST ASSESSMENT REVIEW

Following the prior ex ante review of the cost assessment, the value of the Transmission Asset has increased from £[REDACTED] to £[REDACTED], an increase of £[REDACTED]. It had already increased £[REDACTED] at the time of our previous report.



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