Making a positive difference
for energy consumers

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Date: 21 February 2019

Dear Toby,

Indicative Transfer Value for the Rampion project

Introduction

1. The Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2015 (the "**Tender Regulations**") provides the legal framework for the process which Ofgem runs for the grant of offshore electricity transmission licences. Regulation 4 of the Tender Regulations sets out the requirement for the Authority to calculate, based on all relevant information available to it, the economic and efficient costs which ought to be, or ought to have been, incurred in connection with the development and construction of the transmission assets. This process for calculating the economic and efficient costs includes a number of stages, starting with our confirmation of the initial transfer value, progressing to the Indicative Transfer Value ("**ITV**"), and culminating in our determination of the Final Transfer Value ("**FTV**") for the project.

2. We wrote to you on 13 September 2016, confirming that the £313.1m forecast of costs provided to us on 30 June 2016, for the development and construction (including financing) of the Rampion project (the "**Project**"), would be taken as its initial transfer value (the "**Initial Transfer Value**"). This value was included in the Enhanced Pre-Qualification ("**EPQ**") document and the preliminary information memorandum for the commencement of the EPQ stage of the Project.

3. E.ON's Rampion project team (the "Developer") submitted a revised cost assessment template ("**CAT**") in April 2018 (the "**Indicative CAT**"), indicating a project cost of £388.0m. We have now completed the forensic review of the CAT and ancillary cost information provided by the Project Team. This letter sets out:

- an overview of the work that has been undertaken to estimate the ITV;
- our decision to set £302.9m as the ITV for the Rampion project; and
- the next steps in the cost assessment process.

Overview of work to arrive at the ITV

4. We have engaged extensively with the Developer to understand the cost data and supporting information, and used these discussions to inform our view of what constitutes

the economic and efficient cost for the development and construction of the Rampion transmission assets (the "**Transmission Assets**"). We have set the ITV based on:

- a forensic accounting review of the cost submissions;
- additional information provided by the Developer to substantiate costs; and
- our estimate of the allocation and efficiency of costs across relevant cost categories.

5. To inform our estimate of the ITV, we employed independent consultants Grant Thornton ("**GT**"). GT undertook a forensic accounting investigation to check the accuracy and completeness of the Project's initial costs; in particular, matching proposed CAPEX costs to contract documentation. GT's review commenced in July 2018.

6. Both GT and Ofgem encountered difficulties in obtaining the relevant information to estimate the economic and efficient costs for the Project. The information required was in relation to estimated costs to completion and further justification for including some of the CAPEX costs. With the date of the Invitation To Tender ("**ITT**") approaching, both parties agreed Ofgem would use the figures submitted in the Indicative CAT as the basis for the value in the ITT.

7. There were some outstanding costs that GT had not been able to verify in the available time, such as variations and variation requests. GT have labelled these as "unsubstantiated costs". These will be reviewed at the FTV stage. Similarly, while GT have been able to substantiate most of the methodologies used to allocate costs to the Transmission Assets, we have not been able to apply our full range of cost assessment tests to the Project's submission in the time available. We will apply these tests at the FTV stage.

8. Please note that this approach does not mean that we consider the costs submitted are economic and efficient; nor does it mean that we have accepted the cost allocation methodologies. These will have to be reviewed and supported with evidence from the Project Team at the FTV stage.

9. The following sections detail the outcome of the forensic review and our considerations of what constitutes efficient costs in each of the cost categories within the CAT.

Findings of the forensic review

10. GT's review noted a number of cost increases and decreases from the initial submission of the Indicative CAT, which were discussed and accepted by the Project Team. The net impact of these movements is a reduction of £1.6m. The breakdown of this is included in Appendix 1 (Cost movement summary).

11. GT identified a further £69.8m of unsubstantiated costs. The Project Team has explained that these costs are estimates that may or may not be incurred and have only been able to provide partial justification for this amount. It also included costs that we have disallowed that GT did not review. An aggregate summary of these costs is given in Appendix 2 (Summary of unsubstantiated costs).

Ofgem's position for the ITV

12. We have reduced the Project's ITV by £1.6m for the net effect of cost movements and updated contract values. In the interests of achieving the ITT timescales, we have

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agreed with the Developer that the unsubstantiated costs still under investigation will be included in the ITV. Please note the Project Team will need to provide a robust justification if any of these unsubstantiated costs are to be considered for inclusion in the Project's FTV. We expect that any cost estimates at the ITV stage will be firm at FTV.

Findings of Ofgem's review

13. Our letter of 13 September 2016 to the Developer set out our views regarding the CAPEX elements of the Project's costs and explained how we would take this forward. We recognise that the costs submitted at the Initial Transfer Value stage were best estimates of the costs at that time. As the Project has progressed, these cost estimates have now become firmer, and a significant proportion of the projected costs have been incurred. We have used the Indicative CAT submission, which reflects this updated position, as the basis of our analysis. We have set out our findings in two sections below: one section on crosscutting issues, and the other on our assessment of individual cost categories.

Crosscutting issues

14. In reviewing the individual cost categories, there were some crosscutting issues, which we discuss here.

Reallocation of Elements of Common Cost

15. During our assessment of the Project costs, we use benchmarking to 'sign-post' which cost categories require further investigation. To ensure the costs included in each of the Project's cost categories are consistent with previously assessed projects, we re-allocated costs in the Indicative CAT as detailed in Appendix 3 (Summary of cost reallocations).

16. Following the reallocation of costs, the Project's costs were benchmarked against previous projects in respect of different cost categories. The analysis indicated that subsea cable supply and installation, land cable, and offshore substation were benchmarking higher than expected.

Project management

17. The total value of project management ("**PM**") for the Project is £22.2m. This includes all project management costs included in the DEVEX category in common costs (CR8). A more detailed review of the PM costs will be carried out at the FTV.

Ofgem's position for the ITV

18. We have undertaken a preliminary analysis of the information provided. We have noted the fact that the updated allocation rates still require detailed justification or further calculations to reflect the changes in estimated costs. In light of the limited time available, we have decided to include the original submission on pre-construction costs, and ongoing construction and development costs. We will undertake a more detailed review of the allocation rates in the process to setting the FTV as recommended by GT in their report.

Individual cost categories

We have undertaken a detailed assessment of the submitted costs on the following category-by-category basis:

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- Offshore substation platform (see paragraphs 19 to 28);
- Submarine cable supply and installation (see paragraphs 29 to 36);
- Onshore cable supply and installation (see paragraphs 37 to 39);
- Onshore substation (see paragraphs 40 to 42);
- Connection costs (see paragraphs 43 to 44);
- Common costs (CR 8) (see paragraphs 45 to 47);
- Transaction costs (see paragraph 48); and
- Interest During Construction ("**IDC**") (see paragraphs 49 to 52).

*Offshore substation platform ("**OSP"**)*

19. The Developer's OSP cost submission after cost re-allocations is £87.3m. Our review compared the Project's OSP costs with those of comparable projects. This includes the cost of design, fabrication, installation, and internal resources related to the asset.

20. The Developer submitted outdated values for its contract with ABB in the Indicative CAT. These values were updated through the ITV setting process and have been adjusted accordingly. In total, £1.0m was added to the OSP costs after the ABB contract values were updated (£0.7m) and a £0.3m GT adjustment.

21. The Developer included costs in the Indicative CAT that we deem fully attributable to the generator. This primarily includes costs associated with the array j-tubes and 33kV switchgear. In total, we have disallowed £2.6m in costs associated with the generator assets.

22. Significant delays occurred at the outset of this Project and resulted in costs incurred by the Developer to ensure delivery of the OSP by the Renewables Obligation (**RO**) qualification deadline. The Project failed to qualify for the contracts for difference (**CfD**) allocation round in October 2014 and, consequentially, the Developer had to secure support for the Project under the RO. This brought forward the OSP fabrication deadline by six months. This change in schedule was compounded by the Project's delay reaching the final investment decision which resulted in ABB and Babcock delivering a delayed detailed design.

23. This delay at the start of the Project was compounded as the construction of the OSP progressed. Babcock was behind in the construction milestones, so the Developer made additional payments to keep work on track. We consider the costs incurred to ensure delivery of the OSP by RO milestones to be payments that primarily serve the commercial interests of the Developer. We do not believe that these costs should be passed through to the consumer via the tender regime.

24. In total, we have disallowed £4.1m costs that we attribute to delays and for duplicated work in relation to the Babcock contract that was already contracted and paid for, as not being economic and efficient.

25. The Developer also submitted costs for Babcock's contract in full. However, Babcock did not deliver a complete OSP due to the Developer requesting delivery of the OSP in an incomplete state. In addition to the full costs incurred on the Babcock contract, the Developer submitted costs for sub-contractors to complete the work not completed by Babcock. To avoid passing through duplicate payments for the same work, we have allowed costs from the Babcock contract commensurate to the amount of work completed using the Developer's estimate. We have used this estimated completion status to calculate the amount in the Babcock contract that will be included in the FTV. In total, £1.1m was disallowed for the incomplete work by Babcock.

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Ofgem's position for the ITV

26. The decision to take the delivery of the incomplete OSP incurred significant additional costs. Due to the Developer having a fixed date for the OSP load out and installation, the incomplete work had to be done offshore after the OSP was installed, to meet the generation timescales. Doing this work offshore incurred a significant premium. For the ITV we have included our view of the additional costs incurred to complete the OSP offshore. This value is £34.4m and we will require further justification by the Developer for including this at the FTV stage.

27. For the ITV, we have allowed costs to be included for the share of the OSP that is a result of generation assets on the OSP. At present, we do not have the information to apportion part of the OSP to the generation assets satisfactorily. Using the information we have at the ITV, we have estimated that the value for the generation share of the OSP is £6.7m. This value has been included in the ITV. We will review this amount at the FTV and with updated information, we will re-calculate the actual value to be excluded from the FTV.

28. Overall, the reported cost of the OSP in the Indicative CAT was reduced by £6.8m. Of the original costs reported, we are allowing a total of £80.5m at ITV for the OSP.

Submarine cable supply and installation

29. The Developer submitted costs of £127.5m for this sub-category after cost re-allocations in relation to two submarine cables supplied by LS Cable & System Limited ("**cable 1**" and "**cable 2**", together the "**redundant cables**"), a separate fibre optic cable (the "**FOC**") and two further submarine cables supplied by Hellenic Cables S.A. and Hellenic Cable Industry S.A. ("**cable 3**" and "**cable 4**"). This category includes the cost of submarine cable design, supply and a commensurate proportion of internal resources and travel costs assigned to designing, developing, manufacturing and constructing the assets.

30. In our discussions with the Developer around the submarine cable installation process, it was evident that damage was caused to cable 1 and cable 2. The Developer assessed the damage and determined there was potential for these cables to fail in the future. As a result of this assessment, the Developer took the decision to replace both cable 1 and cable 2 (with cables 3 and 4) and also install the FOC. The separate FOC was installed for ongoing control and commissioning of the transmission and generation assets. The Developer included the costs of cable 1 and cable 2 and the FOC in the Indicative CAT (as well as the costs for cable 3 and cable 4). This was in addition to the costs for a cable repair on cable 1 that was never completed.

31. In the cost assessment guidance[1] (the "**Cost Assessment Guidance**"), we state:

> '2.37. It is the developer's responsibility to ensure that it has adequate and appropriate insurance to recover all costs in the event of an insurable event occurring. Therefore, we do not expect the developer to seek cost recovery through the cost assessment for costs that are either unrecovered or disputed from insurance claims.'

[1] Offshore Transmission: Guidance for Cost Assessment, published 24 July 2017.

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Ofgem's position for the ITV

32. As set out in the Cost Assessment Guidance, we would expect a developer to seek redress from their insurers, or pursue their contractors for damages. This applies to both the cable damage and the cost of the cable repair (£2.0m).

33. Further to this, we have to assess the economic and efficient costs that should be incurred in the construction of the Transmission Assets. We could not accept that including costs for two sets of export cables (4 cables in total) as being economic and efficient.

34. For these reasons, we have excluded the costs associated with the redundant cables in our assessment of the ITV. This has resulted in £60.3m being excluded from the ITV. An additional £1.7m was not included in the ITV due to updated costs being supplied to GT, giving a total of £62.0m being excluded. Of the original costs submitted by the developer, we are allowing a total of £65.5m at the ITV for the submarine cable supply and installation.

35. For the ITV we have included all of the costs for the cables 3 and 4. The cost of supplying and installing these cables has benchmarked higher than we would expect. At the FTV we will review the costs for these cables with the Developer to ascertain the reasons for these higher than expected costs and reduce the costs if necessary.

36. The cost for the FOC has also been included in the ITV (£5.4m), but the justification for the inclusion of these costs will be investigated further during the FTV stage.

Onshore cable supply and installation

37. The Developer submitted £35.7m after cost reallocations as the cost of the onshore cable supply and installation. This figure is significantly above what we would predict for a project of comparable size. The land cable cost category also included £0.2m in costs for a microwave link agreed with the Developer to be a generator cost and this cost was disallowed from the ITV.

38. The Developer contracted Carillion to install the 150kV land cable, however, the company went into liquidation during the process of installation and was unable to complete the works outlined in its contract. To reflect this, the Developer updated the Indicative CAT and reduced the Carillion contract value by £6.5m for work not completed by Carillion. The works left by Carillion were completed by the original subcontractors and these costs are included in the CAT.

Ofgem's position for the ITV

39. The final onshore cable costs for the ITV is £28.5m (after GT adjustments of £0.5m).

Onshore substation

40. Our review compared the Project's onshore substation costs with those of other comparable high voltage (HV) projects. Our assessment of the onshore substation did not examine £22.1m of costs associated with the reactive and harmonic filtering equipment, as each OFTO project is unique in this respect. This value has been included in the ITV and will be reviewed further at the FTV.

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41. The ABB contract costs originally reported in the Indicative CAT were updated by the Developer. This resulted in a £2.3m reduction to the initially reported ABB contract. GT also made a minor adjustment to the onshore substation category submitted in the CAT.

Ofgem's position for the ITV

42. The final ITV value for the onshore substation is £59.4m (including a minor GT adjustment).

Connection costs

43. The Developer reported £4.8m in connection costs, however, the ABB contract within the connection cost category was updated after the Indicative CAT was submitted and the total value of the connection costs was decreased by £0.1m to £4.7m (after additional GT adjustments).

Ofgem's position for the ITV

44. We recognise that these works are necessary to the Project and consider that the full costs included in the Indicative CAT are economic and efficient and should be included in the ITV.

Common costs (CR8)

45. After cost reallocations, the Developer had submitted £44.2m for this category. This includes pre-construction development costs and end-to-end project costs, such as project management and £5m of contingency costs. We do not expect all of this contingency provision to be used as the Project has been operational for some time. We will continue to monitor the use of contingency as the Project approaches FTV.

46. The Developer has also included £13.1m for development costs. GT and ourselves have requested further information on what is included in this value and we have not had a detailed breakdown yet. For this to be considered for inclusion in the FTV, we will require further substantiation of these costs.

Ofgem's position for the ITV

47. GT identified an increase £0.4m of costs from updated contract information and we have included this in the ITV. The final position for the common costs at the ITV is £44.6m, with the understanding that the justification for some of these costs will be investigated further at the FTV stage.

Transaction costs

48. The Developer submitted an estimate for Transaction costs of £1.5m. As this level is broadly in line with previous projects and these costs will only be fully known at the later stages of the Project, we have included them in the ITV and intend to review them at the FTV stage.

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Interest During Construction (IDC)

49. We reviewed the Developer's IDC submission. We confirmed that the date of first power was in November 2017 and noted that IDC was being claimed for periods beyond when the transmission assets were available for use for the transmission of electricity, i.e. they had been commissioned and safely energised.

50. The decisions we have made in relation to the deductions to the Project's CAPEX costs for the ITV result in a consequential IDC reduction. The magnitude of this deduction will be dependent on detailed information relating to the spend profile of included costs, and so is subject to further review at the FTV stage.

Ofgem's position for the ITV

51. Our estimate of the IDC value for the ITV is £18.2m. This includes a deduction to the value set out in the Indicative CAT as a consequence of the Project reaching 'first power' one month earlier than reported in the cashflow. We also curtailed the Developer's period of IDC at the commencement of development of the Project to reflect that the time to taken reach 5% spend on the Transmission Assets was longer than the 33 months we consider to be efficient. We will keep the IDC under review for the Project's FTV.

52. We note that unsubstantiated costs and any allocation adjustments may further affect the level of IDC at the FTV.

Indicative Transfer Value for the Project

53. The ITV for the Project is set out in Table 1 below.

Table 1: Comparison of the Indicative CAT and the ITV

Item	**Indicative CAT submission (£m)**	**Indicative Transfer Value (£m)**
Capital expenditure and development costs	362.7	284.7
IDC	25.3	18.2
Total	388.0	302.9

Next steps

54. The cost assessment process for the Project will proceed into the calculation of the FTV, based on further updates on costs to be provided by you as the Project progresses. To inform our FTV assessment we intend to work closely with the Project Team. The process will involve the following:

- an ex-post forensic review and closing down the issues identified in this letter, in particular, the unsubstantiated costs. If robust justification is not provided, these costs will not be included in the FTV; and
- a detailed review of the Project's CAPEX and development costs. This may be assisted by independent technical consultants.

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55. If you have any questions regarding this letter, please contact Phill Heyden on 020 7901 0516 (or phillip.heyden@ofgem.gov.uk) in the first instance.

Yours sincerely,

Rebecca Barnett
Deputy Director, Commercial & Assurance

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Appendix 1: Cost movement summary

Cost category	Adjustment confirmed (£m)	Included value at ITV, for further consideration at FTV (£m)	Explanation for cost exclusions and further information required at the FTV
Offshore cable			
LS cable	-58.3		This should be covered by CAR (Construction All Risks) insurance and shouldn't be included in the ITV as directed in the cost assessment guidance (section 2.37, July 2017 version). This value will be excluded from the ITV, subject to any further submissions regarding the values to be included at the FTV.
Fibre optic cable		5.4	This will be included subject to confirmation of the diverse routing/separation requirements of the comms systems being part of Rampion's connection agreement requirement with the TSO. We will also expect to see any evidence of alternative solutions discussed with the TSO, such as the diversity/separation being provided in the same subsea cable.
LS cable repair	-2.0		This should be covered by CAR (Construction All Risks) insurance and shouldn't be included in the ITV as directed in the cost assessment guidance. See above regarding the LS cables.
GT adjustments	-1.7		Items found to be incorrect or have been updated since ITV submission and have been agreed with GT during their investigation.
Hellenic cable reduction		23.8	This value is subject to further review at the FTV stage. E.on are to provide further evidence on the project specific costs on the subsea cable supply and installation, explaining why they are over and above our expected benchmark value. This should take the form of a cost stack, indicating what costs are over and above a 'standard' installation. An example of a project specific cost would be the float pits used by the VSMC vessels to install the intertidal sections of the cable.
Subtotal	-62.0	29.3	
Offshore substation			
Generator costs	-2.6		These are costs for items that the developer included in the OSP costs that are proper to the generation part of the OSP. These are in relation to the items such as equipment associated with the 33kV switchgear and array 'J' tubes. These are not part of the transmission system and therefore cannot be included in the OFTO costs.
Inefficient cost in relation to work on the OSP	-4.1		We accept that these are not acceleration payments, but after further consideration we do consider them to be inefficient payments. This is because it was for work that was originally paid and contracted to be done, done later and then paid for again by e.on. Making payments twice for the same work to be carried out is not economic and efficient.
Generator allocation on OSP		6.7	This will be reviewed at the FTV stage, subject to e.on providing additional information on the equipment weight of the generation equipment.
Incomplete work by Babcock	-1.1		% of work not completed by Babcock when Rampion decided to remove the topside out of the yard to meet OSP installation date. It was work that was paid for but not completed by Babcock. This reduction is based on e.on's estimated completion values. The % incomplete costs have been excluded as they will have been paid for twice and this is not economic and efficient.
Offshore OSP premium (Babcock)		29.6	Additional costs for completing Babcock work offshore. This is for review at the FTV as there are costs included for items such as the protection painting that was contracted to Babcock's, but never completed or was considered to be substandard. This is having to be paid for again to be completely redone. There is also a premium here for carrying this work out offshore. These costs must be evidenced by e.on as being economic and efficient in the circumstances.
Offshore OSP premium (ABB)		4.8	Additional costs for ABB completing work offshore. This is similar to the costs above for the offshore work above and will need to be evidenced by e.on as being economic and efficient.
Contract misalignment (ABB)	0.7		Updated cost since ITV submission - minimal but needed to reconcile to submitted costs
GT adjustmnets	0.3		Items found to be incorrect or have been updated since ITV submission and have been agreed with GT during their investigation.
Subtotal	-6.8	41.1	
Land cable			
Generator costs	-0.2		These are costs that the developer included in the OSP costs that are proper to the generation costs and have been agreed with Rampion, eg microwave link costs.
Contract misalignment (Carillion)	-6.5		Updated cost since ITV submission, correcting cost allocations.
GT adjustments	-0.5		Items found to be incorrect or have been updated since ITV submission and have been agreed with GT during their investigation.
Subtotal	-7.2	0.0	
Onshore substation			
Contract misalignment (ABB)	-2.3		Updated cost since ITV submission.
GT adjustments	0.0		This value is minimal, but needed to reconcile back to the total value submitted by Rampion.
Subtotal	-2.3	0.0	
Connection costs			
Contract misalignment (ABB)	0.0		Updated cost since ITV submission.
GT adjustments	-0.1		This value is minimal, but needed to reconcile back to the total value submitted by Rampion.
Subtotal	-0.1	0.0	
Other costs			
GT adjustments	0.4		Items found to be incorrect or have been updated since ITV submission and have been agreed with GT during their investigation.
Subtotal	0.4	0.0	
Total capex reduction	-78.0	70.3	The £70.3m here is the total that is subject to further review at the FTV stage.
IDC			
Front end (0%-5%) adjustment	-0.7		The average 0%-5% capex spend is 34 months. Rampion took 61 months, so this was not an efficient programme duration, so the IDC has been curtailed to reflect the additional time taken. This brings the IDC into what an economic and efficient duration would be.
Commission in Nov '17	-1.5		IDC stopped the month prior to when first generation occurs - Nov 2017. IDC was disallowed as this was the month after first generation
CAPEX allowed/adjusted curtailment	-5.0		As £78.1m has been disallowed, this is the corresponding reduction in IDC that was associated with it. The value is based on the ratio of the original capex value to the subsequent reduced capex value and then applied to the adjusted IDC value to arrive at the additional IDC reduction.
Subtotal	-7.1	0.0	
Total	-85.1		
total capex	-78.0		
Submitted costs (incl IDC)	388.0		
ITV	302.9		*NOTE: Expected benchmarked value is approximately £260m*

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Appendix 2: Summary of unsubstantiated costs

Unsubstantiated costs

	CAT Reference	Para Reference	OFTO amount £
Contingency	CR8	5.2	5,000,000
Bond Dickinson – Legal services	CR8	6.48	78,208
FGP - Land Agent	CR8	6.5	671,434
South Downs National Park – Section 106 Agreement	CR8	6.53	42,700
West Sussex CC – Planning Performance Agreement	CR8	6.53	304,237
West Sussex CC – Section 106 Agreement	CR8	6.53	128,115
FGP - Landowner payments	CR8	6.61	10,642,584
Brown and May Marine LYD – Fishing Liaison Services	CR8	6.63	625,277
Brown and May Marine Ltd – Fishing Agreement Fees	CR8	6.63	425,628
Pinsent Masons LLP - ROW OFTO Legal Advisor	CR8	6.67	1,500,000
General Development costs	CR8	6.68	13,094,491
Offshore completion works	CR2	7.26	4,800,000
OTEAC - Fire Suppression System	CR2	7.35	160,351
MML - 33kv Doors	CR2	7.38	72,940
Wood Group - Corrosion project works	CR2	7.39	109,177
TBC - DNV, LOC, JECs, LV, Elmer Ridge Cables, Mainbrace Marine, Driver Trett,	CR2	7.4	815,000
MPI - Painting Jackup	CR2	7.41	1,161,966
TBC – Painting	CR2	7.42	2,631,423
Uniper - Substation engineering and commissioning support	CR2	7.52	104,357
RO-1518 Float Pit Backfill – East	CR3	8.8	1,013,250
RO-1518 Float Pit Backfill - West	CR3	8.8	1,013,250
Installation West	CR3	8.15	16,466,260
James Fisher - HDD duct and diving services	CR3	8.18	293,100
OrdTek - UXO Consultancy	CR3	8.2	100,000
N-Sea, DSMC, JFMS – Divers	CR3	8.24	250,000
DNV - HV Electrical Testing	CR3	8.25	234,000
EDS - Jointing & OSP	CR3	8.25	340,000
Wind - Cable Storage	CR3	8.25	500,000
? - Landfall Civils	CR3	8.25	850,000
VolkerInfra – HDD	CR3	8.25	850,000
VBMS - Bentoniting x3 (option to be taken up)	CR3	8.25	300,000
N Sea, James Fisher - UXO & Boulder Clearance	CR3	8.25	1,784,137
CCI - Cable Consultancy	CR3	8.25	200,000
VBMS, Deep O, GMSL, ASSO - Post Lay Burial for Second Ends only	CR3	8.25	250,000
N Sea, James Fisher, Fugro - Cable protection (Rock Bagging/Dumping)	CR3	8.25	250,000
Prodive - Diving Consultancy	CR3	8.25	100,000
Carillion variations pending (VRE-001, 004, 006, 007, 008 and 009)	CR4	9.12	274,975
Three Shires - Reinstatement civil work and planting	CR4	9.23	701,502
TBC - Other Reinstatement work	CR4	9.25	1,271,581
E.ON Energy Solutions Limited - Electricity Supply for Commissioning Works	CR5	10.6	100,000
Uniper - Substation engineering and commissioning support	CR5	10.6	292,200
			69,802,143

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Appendix 3: Summary of cost reallocations

Cost category	Pre-reallocation	Post-reallocation	Difference	What was added
CR2 - Offshore Substation	£80,988,235	£87,337,894	£6,349,659	CR5 - Onshore Substation - Cartus - Accommodation for offshore substation staff (orig in CR8) CR8 - Other Costs - **CTV & Offshore Service** CR8 - Other Costs - *Fisherman Management* (pro-rated between offshore substation and subsea cable)
CR3 - Submarine Cable	£117,616,689	£127,506,759	£9,890,069	Re-allocated costs added to subsea cable installation CR4 - Onshore cable - **Carillion** - VO-004 Landfall stone access CR4 - Onshore cable - **Volkerinfra** - Project Management (pro-rated between onshore cable and submarine cable) CR4 - Onshore cable - **Volkerinfra** - 3.1 HDD Design Landfall CR4 - Onshore cable - **Volkerinfra** - 4.1 HDD Landfall Ducting CR4 - Onshore cable - **Volkerinfra** - 4.2 HDD Landfall Accessories CR4 - Onshore cable - **Volkerinfra** - 5.1 Landfall Site Establishment CR4 - Onshore cable - **Volkerinfra** - 5.2 Landfall HDD CR4 - Onshore cable - **Volkerinfra** - 6.1 Landfall Testing CR4 - Onshore cable - **Volkerinfra** - Settlement and Variation Agreement 11/12/15 CR4 - Onshore cable - **Volkerinfra** - VO-001 Option for Enhanced Thickness at Construction Compound CR4 - Onshore cable - **Volkerinfra** - VO-003 Southern Water Survey CR4 - Onshore cable - **Volkerinfra** - VO-004 Supply of Guard Vessel CR4 - Onshore cable - **Volkerinfra** - VO-005 Duct Transportation CR4 - Onshore cable - **Volkerinfra** - VO-006 Additional Design for Drill Profiles CR4 - Onshore cable - **Volkerinfra** - Final Settlement Agreement CR4 - Onshore cable - **Other Costs** - MITIE - Landfall security CR4 - Onshore cable - **Other Costs** - Welfare Hire - Landfall welfare facilities CR8 - Other Costs - **UXO & Boulder Clearance** CR8 - Other Costs - *Fisherman Management* (pro-rated between offshore substation and subsea cable)
CR4 - Onshore Cable	£31,797,868	£35,652,005	£3,854,137	CR8 - Other Costs - Land Agreements (pro-rated between onshore cable and onshore substation) CR8 - Other Costs - *Local Authorities* CR8 - Other Costs - *Property & Leases* (pro-rated between onshore cable and onshore substation)
CR5 - Onshore Substation	£51,039,785	£61,720,887	£10,681,102	CR8 - Other Costs - **Construction Base** CR8 - Other Costs - *Facilities & Communications* CR8 - Other Costs - *Land Agreements* (pro-rated between onshore cable and onshore substation) CR8 - Other Costs - *Property & Leases* (pro-rated between onshore cable and onshore substation)
CR6 - Reactive Substation	£0	£0	£0	
CR7 - Connection Costs	£4,811,431	£4,811,431	£0	
CR8 - Other Costs	£76,472,179	£45,697,213	-£30,774,966	
Project total	£362,726,188	£362,726,188	£0	

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