



Making a positive difference
for energy consumers

Offshore wind farm developers,
Interconnector developers and
other interested parties

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Dear stakeholders

Review of the methodology for the calculation of the Interest During Construction for Offshore Transmission and future Interconnectors granted the Cap & Floor Regime.

1. Overview

Developers of generator build offshore transmission assets invest capital during the planning and construction phase, with no return on this investment until the project is complete. In determining the final asset values that developers receive when the ownership of the assets is transferred to an Offshore Transmission Owner (OFTO) we include the efficient cost of capital for construction through an allowance for Interest During Construction (IDC). IDC is accrued on the actual cash flow when payments are made against the contracts for developing and constructing the transmission assets. We have determined that IDC should be allowed up to the point where the transmission assets are available for use for the transmission of electricity. Similar allowances apply to Interconnector (IC) construction being developed through the Cap and Floor regime.

In December 2013, we committed to annual reviews of the IDC cap for OFTOs to reflect current market conditions, with the latest capped rate being set at 6.83% for offshore transmission projects reaching Final Investment Decision (FID) during 2017/18. In respect of IDC for Interconnector projects, we decided to adopt different calculation methodologies depending on the timing of each individual projects approval stage. For projects which received an Initial Project Assessment (IPA) decision by Ofgem under window 1, we will continue to set the IDC on a project specific basis at the time of Final Investment Decision (FID). For projects in window 2 and beyond, we committed to consider to move to annual updates of IDC to align the calculation inputs with those for the OFTO IDC.

As part of our annual review of the IDC for OFTOs and the planned review of the methodology for calculating the IDC for Interconnectors, we have commissioned Cambridge Economic Policy Associates (CEPA) to review our methodology for calculating the cost of capital for these projects. This analysis is part of a wider analysis that CEPA is providing to us on unifying the framework we use to set the cost of capital across some of the various network assets we regulate. This work will align our methodology for calculating appropriate rates of return across offshore, Interconnector and new, separable, and high-value onshore transmission projects, which include the Hinkley Seabank (HSB) connection.

Minded to decision

This letter presents our **minded-to position** with respect to the methodology to calculate IDC for OFTOs that have yet to reach a FID and Interconnectors that have received an IPA decision as part of the second window of the Cap & Floor regime and any future projects that might be approved under this regulatory framework.

CEPA has drafted a report for us that presents their review of our current methodology. The report is attached to this consultation. Based on their proposed alternative methodology, CEPA has also calculated ranges of IDC for the financial year 2018/19 for both OFTOs and Interconnectors. These ranges are as follows:

- 4.84% to 7.07% (pre-tax nominal) for OFTOs.
- 1.46% to 3.29% (real vanilla) for Interconnectors.¹

We propose to adopt the alternative methodology recommended by CEPA to calculate the IDC for both OFTOs and Interconnectors going forward. For projects reaching FID in the financial year 2018/19, we are minded-to apply the mid-point of the ranges estimated by CEPA, this being **5.96% (pre-tax nominal) for OFTOs** and **2.24%² (vanilla, real) for Interconnectors**.

We would like to invite interested parties to provide their views on the analysis carried out by CEPA and the position set out in this letter by 20 February 2018.

2. Approach

Consistent with our current approach, the methodology proposed by CEPA involves deriving an estimate of the Weighted Average Cost of Capital (WACC) by estimating the cost of equity applying the Capital Asset Pricing Model (CAPM) and the cost of debt through benchmark indexes. Based on their review, CEPA recommend a different methodology for the estimation of each of the different components of the CAPM and the cost of debt. The changes proposed by CEPA and the underpinning rationales are summarized in Table 1.

Table 1 : Current approach and proposed changes

Component	Current approach (OFTOs & ICs)	Proposed change	Rationale
Cost of debt	Estimate based on 20-days trailing average yields of GBP non-financial A and BBB rated bonds with a tenor of more than 10 years	<ul style="list-style-type: none"> • Align the tenor of the benchmarks with the duration of the construction period, which varies depending on the nature of the project • Include an infrastructure index in the calculation • Use spot rates and 1-year averages instead of trailing averages 	<ul style="list-style-type: none"> • Using benchmarks with a tenor longer than the construction period risks may overcompensate investors for the actual cost of debt • Including the infrastructure index allows possible sector-specific differences in debt cost to be taken into account • Using spot rates and 1-year averages better captures the prevailing cost of debt when finance is raised
Risk-free rate	Estimate based on a 10-year trailing	<ul style="list-style-type: none"> • Align the tenor of the benchmarks with the 	<ul style="list-style-type: none"> • Using benchmarks with a tenor longer than the

¹ The range for Interconnectors is reported in vanilla RPI-real terms because the Cap and Floor Financial Models, which constitute a central element of the regime, run with real inputs. For a comparison of the ranges in similar terms, please refer to Table 2 below.

² This value is not the mid-point of the range presented above as we have subtracted the transaction costs proposed by CEPA. We will not include transaction costs in the IDC rate for Interconnectors as these are already included in the Cap & Floor regime.

	average of gilt spot yield	duration of the construction period, which varies depending on the nature of the project <ul style="list-style-type: none"> Use spot rates, 20-days rolling average and 1-year rolling average instead of trailing averages 	construction period risks may overcompensate investors for the actual cost of debt <ul style="list-style-type: none"> Using nominal gilts allows for inflation to be explicitly estimated in a manner that is consistent with other parameters Using current evidence rather than a long-term trailing average better reflects the one-off nature of the investment
Total market return	Geometric mean of historic worldwide equity risk premia sourced from Credit Suisse Global Investment Returns Sourcebook	<ul style="list-style-type: none"> Use forward-looking measures of expected return as produced by Dividend Growth Models (DGM), triangulating different measures when possible Focus on the UK returns only 	<ul style="list-style-type: none"> Forward-looking evidence better reflects the one-off and short-term nature of an investment horizon such as with the IDC Taking in consideration the UK market only is consistent with the methodology used to calculate the risk-free rate
Equity Beta	Estimate based on integrated utility comparators	<ul style="list-style-type: none"> Use construction and engineering companies as comparators³ Uplift the estimated beta by undertaking a relative risk analysis to account for additional risks to which OFTOs and ICs are exposed with respect to the comparators 	<ul style="list-style-type: none"> Construction and engineering companies undertake activities that are better closely linked to the nature of the construction phase The marine environment creates specific challenges during construction to which construction and engineering companies are not exposed
Gearing	Estimate based on integrated utility comparators	<ul style="list-style-type: none"> Estimate based on both integrated utility comparators and evidence (outturn and expected) from new assets, as interconnectors and offshore transmission lines 	<ul style="list-style-type: none"> While gearing levels for construction and engineering companies are very low, evidence from new assets suggest that the regulatory regime can allow projects to achieve higher level of gearing during construction. Drawing on all the available evidence allows to get a more robust estimate
Transaction and carry costs	Transaction costs are not included for OFTOs and are included outside of the IDC rate for ICs	<ul style="list-style-type: none"> Include a transaction cost 	<ul style="list-style-type: none"> Developers will always incur transaction costs so these should be accounted by the regulatory framework

Table 2 below illustrates the ranges estimated by CEPA for the parameters of the CAPM for OFTOs and Interconnectors separately. The IDC estimates are quoted on a pre-tax nominal

³ See annex to this document.

basis for OFTOs and real (RPI) vanilla basis for ICs. For comparison purposes the table also reported the figures that we calculated for our December 2016 calculation.

Table 2 : Indicative values for input parameters of IDC rates⁴

Parameter	Ofgem 17/18*	Ofgem 18/19 (CEPA estimate)	2018-19 proposed range (OFTOs)	2018-19 proposed range (ICs)**
Risk-free rate (nominal)	3.12%	2.76%	0.50% - 0.75%	0.50% - 0.75%
ERP	4.40%	4.40%	7.00% - 7.75%	7.00% - 7.75%
TMR	7.52%	7.16%	7.50% - 8.50%	7.50% - 8.50%
Equity beta	0.93	0.84	0.72 - 0.96	0.80 - 1.04
Gearing	41.2%	24.5%	37.5%	37.5%
Asset beta	0.55	0.63	0.45 - 0.60	0.50-0.65
Post-tax Cost of Equity	7.21%	6.46%	5.54% - 8.19%	6.10% - 8.81%
Cost of Debt	3.86%	3.41%	1.50% - 2.00%	1.60% - 1.85%
Pre-tax nominal WACC	6.83%	6.85%	4.84% - 7.07%	5.31% - 7.49%
RPI inflation	2.78%	3.10%	3.00%	3.00%
Real vanilla WACC, pre-uplift	2.97%	2.53%	1.00% - 2.79%	1.37% - 3.11%
Additional uplifts	1.45%	1.45%	n/a	n/a ⁵
Real vanilla WACC, post-uplift	4.42%	3.98%	1.00% - 2.79%	1.37% - 3.11%

*= 2017-18 values refer to our consultation on IDC published in December 2016⁵, with the exception of the Vanilla WACC (nominal and real), which have been calculated using the same inputs of the consultation but with a different formula, as explained in section 8.1.2 of the CEPA report.

** = the cost of debt reported in the table does not include the transaction costs as proposed by CEPA in the attached report. See footnote 2 of this document for more details.

The detailed methodology is presented by CEPA in the report attached to this consultation. This contains their reasoning for modifying our earlier approach to these calculations.

3. Application to OFTOs

Cap on IDC

⁴ The acronyms used in the table read as follows: ERP = Equity Risk Premia; TMR = Total Market Return

⁵ As signalled in Ofgem's IPA decision on window 2 of the Cap & Floor regime, a development/construction risk premium will not be applied. See section 4.1.2 of the CEPA report for more details.

⁶ https://www.ofgem.gov.uk/system/files/docs/2016/12/minded-to_letter_idc_for_ic_and_ofto.pdf.

We intend to continue to apply a cap rather than a fixed rate to the IDC for offshore transmission.

IDC fixed at FID for duration of project

We also intend to fix IDC at FID for the duration of the project, so that IDC will be fixed until construction of the project is complete

Review

We consider that an annual review of the cap will ensure that it remains flexible and responsive to market movements. Changes resulting from such reviews will not affect the projects that have already reached FID. Any decision to make a change to the cap will be communicated prior to the change coming into force, following consultation where appropriate, to give developers time to factor this number into their FID.

4. Application to Interconnectors

Window 2 projects and future Interconnectors

In respect of projects that have received an IPA decision as part of the second window of the Cap & Floor regime, we intend to move to annual updates of IDC. This will involve changing the timing of setting Interconnector IDCs from individual assessments at the date of FID for each project to an annual update applicable to all projects reaching FID in that year. The IDC will be fixed until construction of the project is complete. The same treatment will apply to future Interconnectors and Ofgem shall open additional application windows in the future.

We also consider that an annual review of the IDC will ensure that it remains flexible and responsive to market movements. Changes resulting from such reviews will not affect the projects that have already reached FID. Any decision to make a change to the cap will be communicated prior to the change coming into force, following consultation where appropriate, to give developers time to factor this number into their FID.

Window 1 projects

As set out in our decision in May 2017, for projects which have already received an IPA decision by Ofgem through window 1, we will continue to set the IDC on a project specific basis at the time of FID. The calculation of the IDC for these projects will be based on the methodology we adopted for the Nemo and NSL projects and will not be updated.⁷ The IDC will be fixed until construction of the project is complete.

Review

We consider that an annual review of the IDC will ensure that it remains flexible and responsive to market movements. Changes resulting from such reviews will not affect the projects that have already reached FID. Any decision to make a change to the cap will be communicated prior to the change coming into force, following consultation where appropriate, to give developers time to factor this number into their FID.

5. Responding and Next Steps

Ofgem welcomes views of interested parties in relation to our minded to decision and the report produced by CEPA attached to this consultation. Please also send us supporting

⁷ Please refer to the following documents for details: <https://www.ofgem.gov.uk/publications-and-updates/offshore-electricity-transmission-and-interconnector-policy-minded-position-interest-during-construction-idc> and <https://www.ofgem.gov.uk/publications-and-updates/decision-cap-and-floor-regime-gb-belgium-interconnector-project-nemo>.

evidence to substantiate your views by 20 February 2018. We are specifically seeking views on the following questions:

1. Do you agree with aligning our approaches to the setting of IDC to ensure consistent application across these network assets?
2. Do you agree with the alternative methodology proposed by CEPA?
3. Do you agree with our minded to position to use the mid-point in the ranges produced by CEPA for OFTO's and ICs?
4. Is there anything else we should consider when making our final decision?

Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website www.ofgem.gov.uk. Respondents may request that their response is kept confidential. Ofgem shall respect this request, subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include reasons for confidentiality. To the extent practicable, respondents are asked to put any confidential material in the appendices to their responses.

If the information you give in your response contains personal data under the Data Protection Act 1998, the Gas and Electricity Markets Authority will be the data controller. Ofgem uses the information in responses in performing its statutory functions and in accordance with section 105 of the Utilities Act 2000.

Responses should be sent to:

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Yours sincerely,



Akshay Kaul

Partner, Networks

Annex – Group of comparator companies

The group of comparators selected by CEPA in the estimation of the equity beta and the gearing ratio comprise thirty construction and engineering companies, including: SPIRAX-SARCO ENGINEERING PLC, HOMESERVE PLC, BALFOUR BEATTY PLC, KIER GROUP PLC, MORGAN SINDALL GROUP PLC, KELLER GROUP PLC, HEADLAM GROUP PLC, COSTAIN GROUP PLC, RICARDO PLC, URBAN & CIVIC PLC, RENEW HOLDINGS PLC, SEVERFIELD PLC, GOODWIN PLC, FULCRUM UTILITY SERVICES LTD, VAN ELLE HOLDINGS PLC, NEXUS INFRASTRUCTURE PLC, LAKEHOUSE PLC, WYG PLC, TP GROUP PLC, SMART (J) & CO (CONTRACTORS), BILLINGTON HOLDINGS PLC, NORTH MIDLAND CONSTRUCTION, CLARKE (T.) PLC, REDHALL GROUP PLC, PLUTUS POWERGEN PLC, NORTHERN BEAR PLC, ASHLEY HOUSE PLC, UNIVISION ENGINEERING LTD, MOUNTFIELD GROUP PLC and TRAFALGAR NEW HOMES PLC.