

# Offshore Transmission: Interest during construction for transitional tender rounds

## Consultation

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### Overview:

For the transitional tender rounds, offshore renewable generator developers are responsible for the development and construction of the transmission assets connecting the generator to the onshore network. These transmission assets are then transferred to the successful Offshore Transmission Owner (OFTO) following the completion of a competitive tender process.

Ofgem assesses the costs of the completed offshore transmission assets to ensure they are economic and efficient as part of the transfer to the OFTO. A component of the overall cost assessment is Interest During Construction (IDC). This is the financing cost allowed by us when setting the transfer value for the transmission assets.

We have recently commissioned updated expert advice on potential rates that could be applied to IDC. This consultation document sets out this advice and we welcome responses on the approach we are minded-to take in applying IDC to transfer values in transitional tender rounds.

# Context

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## Legal framework for competitive tender process

The Energy Act 2004 inserted section 6C into the Electricity Act 1989 which allows the Authority to make tender regulations, with the approval of the Secretary of State, in order to determine on a competitive basis to whom an offshore transmission licence is to be granted. The Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2010 (the Tender Regulations) set out the current legal framework for the Authority to run a competitive tender process for both transitional and enduring projects. The Tender Regulations include the process requirements for the Authority, as well as for developers and bidders.

## Purpose

The aim of providing IDC to developers on projects is to recompense them for the cost of financing the development and construction of transmission assets which are being transferred to OFTO licensees. We have a statutory duty to ensure that the cost is economic and efficient (Regulation 4 of the Tender Regulations) and have commissioned a report from our financial advisers on transitional round two (TR2), Grant Thornton (GT) on IDC. The report has been published alongside this document and reviews the case for a cap on IDC before recommending a range.

The rate for IDC is based on the figure we consider an efficient offshore transmission company would have incurred to fund the development of the assets. We have calculated IDC on a pre-tax nominal basis. The use of a pre-tax rate ensured that developers received a rate that enables them to meet the expected level of tax in the chargeable gain arising from the inclusion of financing costs in the assessed costs. This use of a pre-tax nominal basis is consistent with practice in onshore transmission price controls on reasonably incurred additional outlays not covered by the scope of the preceding price control. The interest rate is only applied up to the date construction of transmission assets ceases and should the programme for expenditure contain inefficient costs or inefficient delays it will not be applied during such a period.

## Associated documents

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- The Electricity (Competitive Tenders for Offshore Transmission Licences) Regulations 2010. [Same link for tender regulations]  
[www.legislation.gov.uk/uk/si/2010/1903/contents/made](http://www.legislation.gov.uk/uk/si/2010/1903/contents/made)
- Ernst & Young. Interest During Construction: A report for Ofgem for UK Transitional Round 1 Offshore Transmission Assets.  
[www.ofgem.gov.uk/Networks/offtrans/rott/Documents1/Appendix%206-%20EY%20report%20on%20IDC.pdf](http://www.ofgem.gov.uk/Networks/offtrans/rott/Documents1/Appendix%206-%20EY%20report%20on%20IDC.pdf)
- Grant Thornton. Interest during construction for offshore transmission assets.  
[www.ofgem.gov.uk/NETWORKS/OFFTRANS/PDC/CDR/CONS2011/Pages/Cons2011.aspx](http://www.ofgem.gov.uk/NETWORKS/OFFTRANS/PDC/CDR/CONS2011/Pages/Cons2011.aspx)
- Offshore Electricity Transmission: Final Statement on Competitive Tender Process.  
[www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=85&refer=Networks/offtrans/pdc/cdr/cons2009](http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=85&refer=Networks/offtrans/pdc/cdr/cons2009)
- Offshore Transmission: Cost Assessment Report for the Robin Rigg Transmission Assets.  
[www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=52&refer=Networks/offtrans/rott](http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=52&refer=Networks/offtrans/rott)

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# Executive Summary

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## Background

For the transitional tender rounds, offshore renewable generator developers are responsible for the construction of the transmission assets connecting the generator to the onshore network. These transmission assets are then transferred to the successful Offshore Transmission Owner (OFTO) following the completion of a competitive tender process.

Under the Tender Regulations we assess the costs of developing and constructing the completed assets to ensure they are economic and efficient. The cost assessment report on Robin Rigg (the first project granted an OFTO licence) describes this process and the general principles we follow. Over time, as further projects are completed, it will be possible to make greater use of actual costs for benchmarking and adopt consistent metrics for cost allocation in conjunction with the forensic investigation and technical assessments when determining the assessed transfer value. Interest During Construction (IDC) recompenses the developers for the cost of financing the development and construction of the transmission assets. IDC for offshore transmission as a component of the overall cost allowed by us as part of this cost assessment process must be economic and efficient in respect of both rate and period. The interest rate is only applied up to the date construction of transmission assets ceases and should the programme for expenditure contain inefficient costs or inefficient delays it will not be applied during such a period.

The relevant IDC rate is an important consideration because although generators initially bear most of this cost through transmission charges, the IDC rate will eventually impact on the price for offshore wind and thus on consumers. To date, as a proportion of costs IDC has a median value of ten per cent. With potentially around £3bn investment eventually in transitional tender rounds, a one per cent difference in the interest rate applied would amount to £30m or approximately £1 per electricity household or an annual charge of 5 pence.

As part of our cost assessment process to date, developers have provided their assessment of the cost of financing their project together with related supporting documentation. Developers have provided a wide range of interest rates to be considered for the purposes of IDC and varying quality of supporting documentation. In the first transitional tender round (TR1) the range of rates requested was from 2 per cent to 14 per cent. We are not confident that the variation between projects in a round was explained by underlying economic factors given the similarity of financial risk across the projects.

During TR1 we considered what an appropriate cost of financing for such assets ought to have been and whether consequently there were reasonable grounds to impose a cap on the interest rate. We used our own internal assessment in conjunction with a report by our financial advisers (see Ernst & Young (E&Y) report covering the period 2005-09) to come to a view, based on the information available at the time, on the appropriate cost of financing. In April 2010 we wrote to the developers in TR1 that we would apply a cap of 10.8 per cent for IDC on a pre-tax nominal basis for transitional tender round projects. This figure was applied retrospectively to all TR1 projects and was taken from the top of the range recommended by our advisers.

## Updated analysis

We noted during 2010 that the liquidity of funding for projects had improved. The level of debt available for prospective bidders for the transmission assets provides an illustration of this. In early 2011 we asked GT, our financial adviser for TR2, to examine the period 2009 and 2010 and provide their views on a suitable range for IDC (see GT report). They advised that based on their analysis an appropriate range for IDC would be 7.6 per cent to 9.7 per cent which reflected the change in market conditions for 2009 and 2010.

We have considered their analysis and that previously from E&Y and are minded-to change our approach to IDC for projects in both TR1 and TR2.

## Proposed approach

The current cap on interest on cash flows (IDC) associated with the construction of transmission assets is 10.8 per cent; we are minded, subject to consultation responses, to amend this to **7.6 per cent**. It is proposed to retain this in the form of a cap. Any projects requesting a lower forecast IDC will have their own rate applied to avoid consumers funding a figure above that incurred by the developer. The basis for a cap was initially described in more detail in the E&Y report and has been confirmed again in the GT report together with a recommendation on a revised range. It is proposed that this cap will be applied from **1 September 2011** (Chapter 4 describes this in greater detail) and will apply to existing TR1 projects (to the extent that they are still under construction) and TR2 projects. Thus it will apply on a calendar rather than project or tender specific basis. It is not proposed to apply the rate of 7.6 per cent retrospectively.

We will review our approach to IDC (the rate, the cap and the date) from time to time and our approach to application may change in the future as market information on potential funding costs changes.

## Key questions

We are consulting for views on a number of aspects and indicating our current minded-to approach. These are:

- to retain a cap to put a limit on the level of interest rate allowed to developers
- to use the bottom of the recommended range, implementing a revised cap of 7.6 per cent
- to use a calendar period rather than a tender round as the basis for any cap
- to use the existing cap of 10.8 per cent to 31 August and to apply the new cap from 1 September 2011
- to keep under review our general approach to IDC and the level for a cap as market circumstances change.

Views are sought by 12 August 2011.

# 1. The Background

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## Chapter Summary

This chapter outlines the offshore transmission regulatory regime and the progress made in implementing it, our previous decision on capping the rate of IDC for transitional projects and the changes in factors affecting IDC.

## Offshore transmission regulatory regime

1.1. Ofgem, in collaboration with the Department of Energy and Climate Change (DECC), has established a new regulatory regime for offshore electricity transmission. A key part of the regime is the grant of offshore transmission licences on the basis of a competitive tender process. The successful bidder becomes the OFTO responsible for operating the assets according to the licence.

1.2. This regulatory regime is expected to make an important contribution to the achievement of the UK's share of the EU's target of generating 20 per cent of energy from renewable sources by 2020. In addition, the regime has been designed to ensure connection to the onshore grid in a timely and cost effective manner, whilst maintaining the integrity of the system as a whole and achieving best value for electricity consumers.

1.3. The Energy Act 2004 inserted section 6C into the Electricity Act 1989 which allows the Authority to make tender regulations, with the approval of the Secretary of State, in order to determine on a competitive basis to whom an offshore transmission licence is to be granted. The Tender Regulations set out the legal framework for the Authority to run a competitive tender process for offshore transmission projects.

1.4. The first two rounds of tenders are for transitional projects where the transmission assets have been or are being constructed by offshore developers for transfer to an OFTO upon completion of construction. This will be followed by tenders for enduring projects where offshore developers will have the flexibility to choose whether they or the OFTO design and construct transmission assets. Under the enduring regime, regardless of the party who constructs the offshore transmission assets, an OFTO will be responsible for the ongoing ownership and operation of the transmission assets.

1.5. The Tender Regulations set 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 developing and constructing the offshore transmission assets in respect of a transitional project. This assessment of costs is used by the Authority to determine the transfer value of the transmission assets.

## Current position

1.6. Ofgem commenced TR1 for nine projects in June 2009. There are six projects for tender in TR2. The tender exercise for three of these six projects commenced in November 2010 (TR2 Tranche A). Table 1 shows the assets for tender in these transitional rounds are

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estimated to have a combined transfer value of £3.2bn and a combined generation capacity of 4.8GWs.

Table 1: Transitional round projects

Qualifying Project	Transitional Round (TR)	Capacity (MW)	Transfer Value (£m)*	Transmission construction progress**
Barrow	1	90	36.5	Complete
Gunfleet Sands	1	173	49.5	Complete
Ormonde	1	150	101.1	Complete
Robin Rigg	1	180	65.5	Complete
Thanet	1	300	163.1	Complete
Walney 1	1	184	101.8	Complete
Greater Gabbard	1	504	316.6	In progress
Sheringham Shoal	1	315	182.1	In progress
Walney 2	1	184	105.0	In progress
Gwynt y Mor	2a	576	305.7	In progress
Lincs	2a	250	310.5	In progress
London Array	2a	630	475.7	In progress
Humber Gateway	2b	300	218.3	In progress
Race Bank	2b	620	Circa 500.0	In progress
West Duddon	2b	389	255.0	In progress
<b>All Transitional Round (TR) projects</b>		<b>4845</b>	<b>3186</b>	

\* These are the latest assessment values. Where a final cost assessment has taken place (Gunfleet Sands and Robin Rigg) the value reflects this and will not change. For other projects the value is subject to change.


\*\* Where a project is listed as complete it means the full transmission system has been energised and that it is conveying electricity.

1.7. We are undertaking further work to implement the enduring regime. Details of the progress can be found on our website.<sup>1</sup>

## IDC

1.8. IDC refers to the cost of financing the development and construction of offshore transmission assets. Industry commonly recognises this financing cost as part of capital expenditure. We consider that for the purposes of the cost assessment IDC is the rate of interest that an efficient OFTO ought to incur during the development and construction phase. This may not be the same rate that a developer considers they incurred.

<sup>1</sup> <http://www.ofgem.gov.uk/Networks/offtrans/et/Pages/et.aspx>



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1.9. The relevant IDC rate is an important consideration because although generators initially bear most of this cost through transmission charges this will eventually impact on the price for offshore wind and thus on consumers. With potentially £3bn investment eventually in the transitional tender stage of offshore transmission, a 1 per cent difference in the interest rate applied is equivalent to £30m (or approximately £1 per electricity household) and thus would over 20 years impact on consumers' bills by some 5 pence per annum.

1.10. Transitional tender rounds and enduring tender rounds treat IDC differently. For transitional rounds, the developers are responsible for constructing the offshore transmission assets for transfer to an OFTO and we determine the IDC as one aspect of our assessment of the transfer value. In contrast for enduring rounds, in the case where the offshore transmission licensees design and construct transmission assets, it is up to the bidders to choose a rate for IDC as part of their competitive bid.

1.11. This consultation focuses on the IDC in respect of the projects for the transitional rounds and not the enduring rounds.

1.12. In TR1 developers provided a wide range of interest rates for us to consider, from 2 per cent to 14 per cent. We were concerned with the wide range of their proposed interest rates and the varying quality of supporting documentation across developers. E&Y, our financial adviser for TR1, performed an independent benchmarking exercise on the IDC rate. They concluded that regulatory intervention on IDC costs was reasonable and that the appropriate range of interest on financing costs for TR1 was 9.4-10.8 per cent based on available comparators. We decided that adopting the top end of the range proposed by E&Y, ie 10.8 per cent, would be appropriate given the:

- E&Y expert advice on the period 2005-09
- impact of the credit crunch and associated funding volatility.

1.13. Following the E&Y report, in April 2010 we informed the developers in TR1 whose project interest rates were above 10.8 per cent that their rates were to be capped at 10.8 per cent on a pre-tax nominal basis. Where the developers submitted a rate below the cap, their proposed level of interest rate has been used.

### **This consultation**

1.14. During 2010, we noted the liquidity of funding for projects improved. In addition, there was a wide range, and higher absolute levels, proposed by TR2 Tranche A developers on the rate of IDC they would incur. These two factors were the reason for obtaining further expert advice on IDC from GT, our financial advisers for TR2. We invite views on our minded-to approach to adjusting the IDC for application to transitional projects, as set out in detail in the following chapters.



## 2. Retaining IDC cap

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### Chapter Summary

This chapter sets out our general approach to assessing IDC costs and the process of determining the applicable IDC rate cap for TR1 projects to date. This includes the IDC rates that developers requested and the expert advice we collected, as well as changes in the financial market conditions and the implications of those changes for the IDC rate to transitional projects in TR1 and TR2. It also sets out our minded-to approach to retaining the cap to put a limit on the IDC rate for transitional projects to protect customers.

### Question box

**Question 1: Do you agree that it is appropriate to retain a cap to put a limit to developer's claims on financing?**

**Question 2: Do you agree with the general approach to determining the allowable IDC as set out below?**

### Application of IDC to date

#### Scope of IDC

2.1. The aim of providing IDC to developers on projects is to recompense them for the cost of financing the development and construction of transmission assets to be transferred to OFTO licensees. Regulation 4 of the Tender Regulations provides for Ofgem to calculate the economic and efficient costs of developing and constructing the transmission assets.

2.2. We calculate IDC on a pre-tax nominal basis. The use of a pre-tax rate ensures that developers receive a rate that enables them to meet the expected level of tax in the chargeable gain arising from the inclusion of financing costs in the assessed costs. This use of a pre-tax nominal basis is consistent with practice in onshore transmission price controls on reasonable additional outlays not covered by the scope of the preceding price control.

#### *The duration of financing*

2.3. For the purposes of IDC, we consider that construction ceases once the transmission assets are commissioned. The commercial supply of electricity to the transmission system which follows commissioning also indicates that the assets are complete and operational.

2.4. Each transitional project developer will have a project specific commissioning programme for the assets that it is constructing. It is important to differentiate between commissioning activities that are associated with the transmission assets and the wind farm generation assets. Before generation assets can be fully commissioned, the commissioning of the transmission assets will need to have reached a stage that permits safe energisation of the transmission system and provides an offshore transmission system that is ready to transport electricity on a commercial basis. There may be occasions where transmission asset and generation asset commissioning activities occur in parallel.



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2.5. With these distinctions in mind, we have determined that IDC should be allowed up to the point where the transmission assets have been constructed and are fit for use as a system, or as part of a system, for the use of transmission of electricity. Where projects are phased, IDC will cease at the completion of each individual phase in accordance with the same principles. If we consider there is evidence of inefficient and uneconomic delays in the construction or commissioning programme for the transmission assets, the period of applicability of IDC may be curtailed to reflect this.

2.6. Where projects have been purchased from other developers, we consider that the IDC should commence on the date of the acquisition. IDC is not applied to the period over which the previous developer incurred costs because the purchase cost will reflect this.

*Cost items allowable for IDC*

2.7. IDC is only applicable to the cash flow that represents the capital expenditure and development costs. Where amendments have been made to the developer's submitted cost information from either the re-allocation of costs from the transmission to the generation build part of the project or from efficiency assessment of the costs, this will be reflected in the cash flow. This ensures that the IDC calculated for the transmission assets reflects the economic and efficient costs of developing and constructing the assets.

2.8. IDC is calculated on the actual cash flow which represents when payments are made against the contracts for developing and constructing the transmission assets.

**Existing IDC cap**

2.9. For calculating the total IDC, we initially requested developers to provide cash flow information and the interest rates signed off on their project, supported by relevant internal (ie board level) documentation to verify the applicable rates. The first response from TR1 developers was generally based on the rates sanctioned as part of their financial commitment to the project. This was used in calculating the indicative transfer value which was used at the Invitation to Tender (ITT) stage for bidders to be able to submit a tender revenue stream.

2.10. Developers also provided supporting evidence to substantiate their IDC submissions including project authorisation documentation. Although we expect developers to minimise the costs of developing both the generation and transmission facilities, the IDC costs of transitional projects are not as transparently subject to competitive pressures. Across developers in TR1, proposed interest rates varied widely, from 2 per cent to 14 per cent.

2.11. We engaged E&Y as our financial adviser on TR1 to support us throughout the IDC cost assessment process. More details about the supporting information can be found in the next chapter when we discuss specifically the applicable IDC rate.

2.12. Based on the information available at the time, in early 2010 E&Y examined the applicable IDC issue in respect of the period 2005-09 for TR1 projects. They concluded (see E&Y report) that a cap was appropriate and in line with Ofgem's primary duty to protect current and future customers; and the appropriate range of IDC rate was 9.4 per cent to

10.8 per cent. Their recommendation was based on a benchmarking exercise of comparative companies taking into account, amongst other things, the financial market conditions during 2005 to 2009, its impact on funding costs and the availability of finance.

2.13. The relative impact of the credit crunch reduced funding liquidity in the period examined. This meant that in general only the large integrated energy companies were able to develop and finance offshore wind farms at this time. Consequently these were the best comparators. These companies achieved gearing and beta levels indicated by our advisers. Other forms of funding were largely unavailable. As a result we concluded that adopting the top end of the range would be appropriate.

2.14. In April 2010 we wrote to the developers in TR1 whose project interest rates were above 10.8 per cent to inform them that, based on our analysis at that time, their rates were to be capped at 10.8 per cent. Where the developers provided evidence of a rate below the cap, their proposed level of interest rate was used.

2.15. Subsequently in our TR1 cost assessment reports to bidders and developers later in 2010 and published on our website, we indicated the context for our decision to use the upper limit of the range as a cap. We also indicated that where project delivery programmes are delayed such that the majority of project funding falls outside the period examined by our advisers we may consider reviewing the appropriate interest rate cap for such TR1 projects.

## **Financial market development**

2.17. The majority of projects in TR1 were approved during the credit crunch which commenced in summer 2007, peaked following the collapse of Lehman Brothers<sup>2</sup> in September 2008, and started to ease by 2009 following concerted action by governments worldwide. However market conditions for debt financing only recovered slowly throughout 2009 and the continuation of this recovery remained uncertain in early 2010.

2.18. We noted that the liquidity of funding for projects improved during 2010. The evidence for this included:

- funding from the European Investment Bank (EIB) for UK wind farms of almost €2bn
- continued funding at relatively high gearing for transmission plcs
- the availability of some £4bn of funding for bidders in the first transitional tender round.

## **This consultation**

2.19. For TR2 Tranche A projects we again requested developers to indicate the IDC they had incurred. The range of interest across developers was from 8.5 per cent to 16.5 per cent. Given this range was above the previous range recommended by our advisers and

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<sup>2</sup> Lehman Brothers was the fourth largest US investment bank before the collapse.

market conditions had improved we commissioned advice from our financial advisers, GT on TR2.

2.20. In early 2011, we appointed GT to examine the applicable IDC rate in respect of 2009 and 2010. They advised that, based on their analysis including TR2 Tranche A assets (see GT report):

- It was reasonable for Ofgem to continue to cap IDC costs to protect customers, ensure efficient costs and maintain consistency of approach between TR1 and TR2 Tranche A IDC payments.
- An appropriate range of the applicable IDC rate for a cap would be 7.6 per cent to 9.7 per cent.

### **Retaining IDC cap**

2.21. Ofgem has reviewed TR1 and TR2 developers' information and E&Y's advice that we used for determining the existing IDC rate cap, and considered the new evidence including GT's advice and implications of the latest financial market conditions on IDC.

2.22. We consider that there remains a clear case for us to retain a cap to put a limit on the level of interest rate allowed to developers. This is to ensure the costs incurred in developing and constructing the offshore transmission assets are economic and efficient. Due to the improvement in the credit markets since our decision on IDC in April 2010, developers now have more opportunities to achieve a lower cost of capital than on the initial projects. In addition, we remain concerned that the IDC rates requested by some developers cannot be satisfactorily justified, (as high as 16.5 per cent on one TR2 project).

2.23. In the following chapters, we will discuss the specific issues in relation to the IDC rate cap should be applied for the transitional projects.

## 3. IDC cap rate

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### Chapter Summary

Building on our minded-to position to retain an IDC cap, this chapter presents the evidence we have considered in reviewing the IDC cap rate for application to TR1 and TR2 projects and sets out the options and our proposals.

### Question box

**Question 1: Do you agree we should set the cap on IDC for transitional projects at the bottom of the range from our advisers, ie 7.6 per cent?**

### Evidence base

3.1. In order to assess an appropriate level for the IDC that would be incurred by an efficient and economic OFTO and in the absence of any OFTOs actually undertaking construction we consider it is necessary to have:

- a suitable set of comparative companies
- independent market based evidence
- indications of the position of an OFTO's financing costs relative to developers.

### Comparative Companies

3.2. We have used the vertically integrated energy companies as comparators. This was because obtaining a meaningful set of alternative comparative companies proved difficult due to the absence of available data on:

- OFTOs obtaining finance and undertaking construction
- transmission plcs engaged in providing offshore connections as a material element of their business
- offshore developments funded by special purpose vehicles.

3.3. However, in future it may become possible to use the funding available to OFTOs and transmission plcs if they better reflect the level that an economic and efficient OFTO could achieve for construction and development.

### *Independent market based evidence*

3.4. There is a substantial body of evidence in relation to cost of capital available to the market from specialist suppliers such as Bloomberg and Reuters/Datastream in addition to published accounts by relevant Energy plcs and market commentary. These sources were used by our financial advisers to develop their views on IDC and are identified in both the E&Y and GT reports.

### *The position of an efficient OFTO relative to developers*

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3.5. The analysis in the National Infrastructure Plan and the Electricity Market Reform Consultation document (highlighted in the report by GT) together with general market comment on regulated utilities indicate that an efficient OFTO ought to be able to achieve high levels of debt at the same time as retaining investment grade credit rating. Consequently an OFTO ought to be able to achieve a lower IDC than existing developers as discussed further in para 3.13.

### The E&Y Report

3.6. E&Y undertook an independent exercise to identify an appropriate range of interest rates for application to transitional projects. In early 2010 E&Y focussed on TR1 projects and assessed market data related to 2005 to 2009 inclusive. Ofgem took the view that adopting the top end of the range proposed by E&Y, ie 10.8 per cent, would be appropriate for the reasons discussed in para 2.13.

3.7. E&Y considered 9.4-10.8 per cent the appropriate range of IDC rate for 2005-09 as shown in the last row of Table 1 below.

Table 1: E&Y weighted average cost of capital (WACC) computation

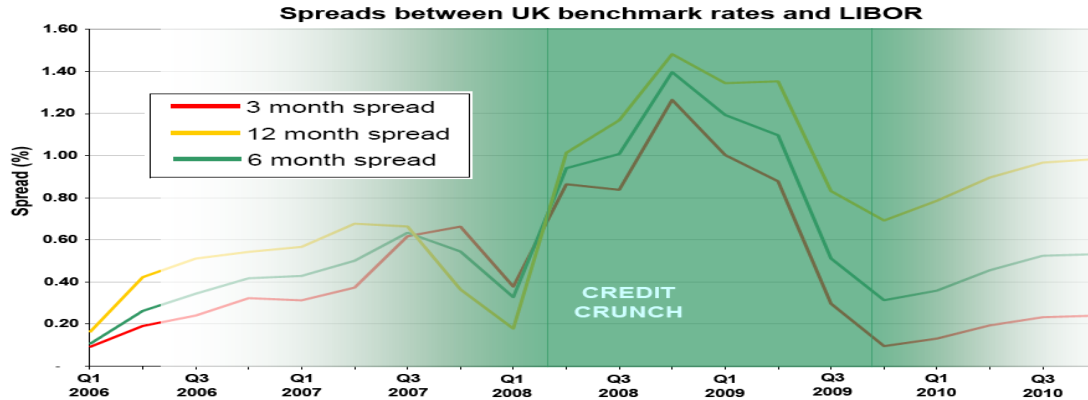
WACC Computation	Low	High
Risk free rate (real)	2.4%	2.4%
Risk free rate (nominal)	4.5%	4.5%
Market premium	5.0%	5.0%
Asset beta	0.50	0.70
Equity Beta	0.61	0.80
<b>Cost of Equity</b>	<b>7.5%</b>	<b>8.5%</b>
Risk free rate	4.5%	4.5%
Debt Premium	1.3%	1.3%
<b>Cost of debt before tax</b>	<b>5.8%</b>	<b>5.8%</b>
Tax rate	28.0%	28.0%
<b>After-Tax Cost of Debt</b>	<b>4.2%</b>	<b>4.2%</b>
Industry indebtedness (D / (D+E))	23.1%	16.7%
Industry gearing (D / E )	30.0%	20.0%
<b>Post tax WACC</b>	<b>6.8%</b>	<b>7.8%</b>
<b>Vanilla WACC</b>	<b>7.1%</b>	<b>8.1%</b>
<b>Pre tax WACC</b>	<b>9.4%</b>	<b>10.8%</b>

### Credit crunch

3.8. The main factor impacting recent funding for projects has been the credit crunch starting in 2007 and peaking in 2008. Despite concerted action by governments which eased rates the availability of credit remained tight in 2009. Table 2 below from the GT Report, uses credit spreads to show the impact of the credit crunch on rates.

Table 2: Spreads between UK Gilts and London Interbank Offered Rate (LIBOR)

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Source: The GT Report

### The GT Report

3.9. In order to encompass the cash flow of projects in TR2, in early 2011 GT examined the period 2009 and 2010. They confirmed a cap remained appropriate and that the appropriate range of IDC for 2009-10 was 7.6-9.7 per cent as shown in Table 3 below.

Table 3: GT WACC computation

WACC Computation	Low	High
Risk free rate (real)	1.27%	1.85%
Risk free rate (nominal)	3.80%	4.40%
Market premium	4.50%	4.50%
Asset beta	0.40	0.60
Equity beta	0.54	0.69
<b>Cost of Equity</b>	<b>6.2%</b>	<b>7.5%</b>
Risk free rate (nominal)	3.80%	4.40%
Debt premium	1.50%	1.80%
<b>Cost of debt before tax</b>	<b>5.3%</b>	<b>6.2%</b>
Tax rate	28.0%	28.0%
After tax cost of debt	3.8%	4.5%
Industry indebtedness (D/(D+E))	33.3%	16.7%
Industry gearing (D/E)	50.0%	20.0%
<b>Post-tax WACC</b>	<b>5.4%</b>	<b>7.0%</b>
<b>Vanilla WACC</b>	<b>5.9%</b>	<b>7.3%</b>
<b>Pre-tax WACC</b>	<b>7.6%</b>	<b>9.7%</b>

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3.10. We are satisfied that E&Y’s and GT’s advice were well evidenced and based on established methodology commonly applied by the industry. For example, GT’s results cross-checked a range of returns available on alternative infrastructure projects as shown below in Table 4 adapted from the GT Report.<sup>3</sup>

Table 4: GT’s summary of indicative WACC estimates based on different funding models

<b>Funding model</b>	<b>WACC basis</b>	<b>Source</b>	<b>Indicative WACC</b>	<b>Comment</b>
Regulated markets <sup>4</sup>	Post-tax nominal	National Infrastructure Plan, Table A.1	4.2% to 6.9%	Includes allowance for construction risk
Availability based payment <sup>5</sup>	Vanilla WACC	National Infrastructure Plan	5.9% to 7.7%	OFTOs receive an availability based payment
Offshore wind hurdle rates (R1/R2)	Equivalent to Vanilla WACC	Electricity Market Reform Consultation	10.1% to 11.2%	Reflects construction risk, price risk and volume risk

## Cap options

3.11. Based on GT’s updated analysis, we considered where within the range we should set the IDC cap for TR1 and TR2 projects.

### Top of range (9.7 per cent)

3.12. Other things equal, it would not be unreasonable to accept the top of the range if developers had to continue to rely on equity/corporate funding as they did during the credit crunch. This is because the cost of equity is higher than debt and the level of gearing for the integrated energy companies used as comparators in the report is lower than for transmission plcs or OFTOs.

3.13. We have already indicated in our TR1 cost assessment reports that this was a main reason why we had selected the top of the range from E&Y in early 2010. This however is no longer the case given the improvement in financial market liquidity and reduction in costs in the last two years. The TR2 Tranche A projects all have the opportunity to secure funding from EIB and related commercial funding. Consequently the level of debt funding available is clearly well above the 17 per cent assumed for the top of the range by E&Y and GT in their reports. On this basis, we consider selecting the top of the range unjustifiable at this time.

<sup>3</sup> See “National Infrastructure Plan 2010” published by HM Treasury and Infrastructure UK, <http://www.hm-treasury.gov.uk/d/nationalinfrastructureplan251010.pdf>

<sup>4</sup> Regulated asset base model, eg water, electricity, regulated airports

<sup>5</sup> PPP/PFI schemes



### Bottom of range (7.6 per cent)

3.14. As Table 3 above showed, GT's analysis assumed a maximum debt funding level of 33 per cent when assessing the bottom of their recommended range of 7.6 per cent to 9.7 per cent. We consider this level of gearing is particularly prudent. Over 80 per cent funding from borrowing in project financing deals under current market conditions is not uncommon. Since the cost of debt is lower than the cost of equity, this provides opportunities for cheaper capital than that envisaged by GT in their report. In particular:

- GT's range of assumed gearing is below the gearing applicable in price control for network companies and there is evidence that they have continued to be able to maintain debt funding levels above 33 per cent in this period
- the existence of debt funding from the EIB at a higher level than 33 per cent (together with the likelihood such funding has been matched by commercial lenders thus doubling the level)
- the attraction of debt funding for OFTOs in TR1 bids at significantly higher levels than 33 per cent.

3.15. Therefore, we are minded-to use the bottom of the range as an appropriate figure to calculate the indicative and final transfer values. We will review our approach to IDC (the rate, the cap and the date) from time to time and our approach to application may change in the future as market information on potential funding costs changes.

3.16. We note that if developers see that they can obtain a higher return by requesting a high rate and suffer no penalty, this may provide an incentive to exploit the existing asymmetry of information in respect of regulation. We wish to encourage developers in future submissions to consider carefully the rate requested and fully take into account the actual costs they incur. These should reflect the level of debt achievable and its cost which may in future lead to a change in our approach to IDC.

3.17. For comparison it is noted that the requested return of 10.5 per cent and 16.5 per cent by two of the developers in TR2 Tranche A is largely above the expected return of 10.1 per cent to 11.2 per cent for offshore wind generation projects in TR1 and TR2 indicated as achievable in DECC's Electricity Market Reform consultation.<sup>6</sup> ***Further, we would encourage developers to provide better substantiation, particularly in respect of debt funding and costs than they have provided to date.***

### Ofgem's proposed revision

3.18. Taking into account these arguments and the information available to date **the Authority is minded-to change the applicable IDC rate from 10.8 per cent to 7.6 per cent.** We seek your views on this proposal.

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<sup>6</sup> <http://www.decc.gov.uk/en/content/cms/consultations/emr/emr.aspx>

## 4. Applicable Period

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### Chapter Summary

In this chapter we set out the principles for determining to which period a new cap rate should be applied and the related factors. We present our minded-to approach and our consideration of other alternatives.

### Question box

**Question 1: Do you agree with our proposed approach? If not, why?**

**Question 2: Are there any other alternative we have not considered? If yes, please set out the details.**

**Question 3: Do you agree to the proposed date of implementing our minded-to changes set out in this consultation document?**

### Key factors

4.1. The overarching principle is that the cap should be closely aligned with the true efficient costs incurred. In general, cost of capital is incurred efficiently on a just-in-time basis, so that funds are available on time to match the timing of making the necessary payments, which in turn depends on the timing of construction. This means that the IDC cap should reflect the timing of construction. Thus it applies across the period of obtaining funding for construction and not, necessarily, at the initial point a project is approved.

4.2. We outline below the planned and actual progress of construction so far and the associated cash flows.

4.3. The qualification for projects in TR1 was in July 2009 and for TR2 Tranche A was in September 2010. Qualification for projects in TR2 Tranche B is intended to be in April 2012. For projects under construction the developers' forecast timescales for construction completion varied from June 2010 to September 2011 for TR1 and from October 2011 to December 2012 for TR2 Tranche A.

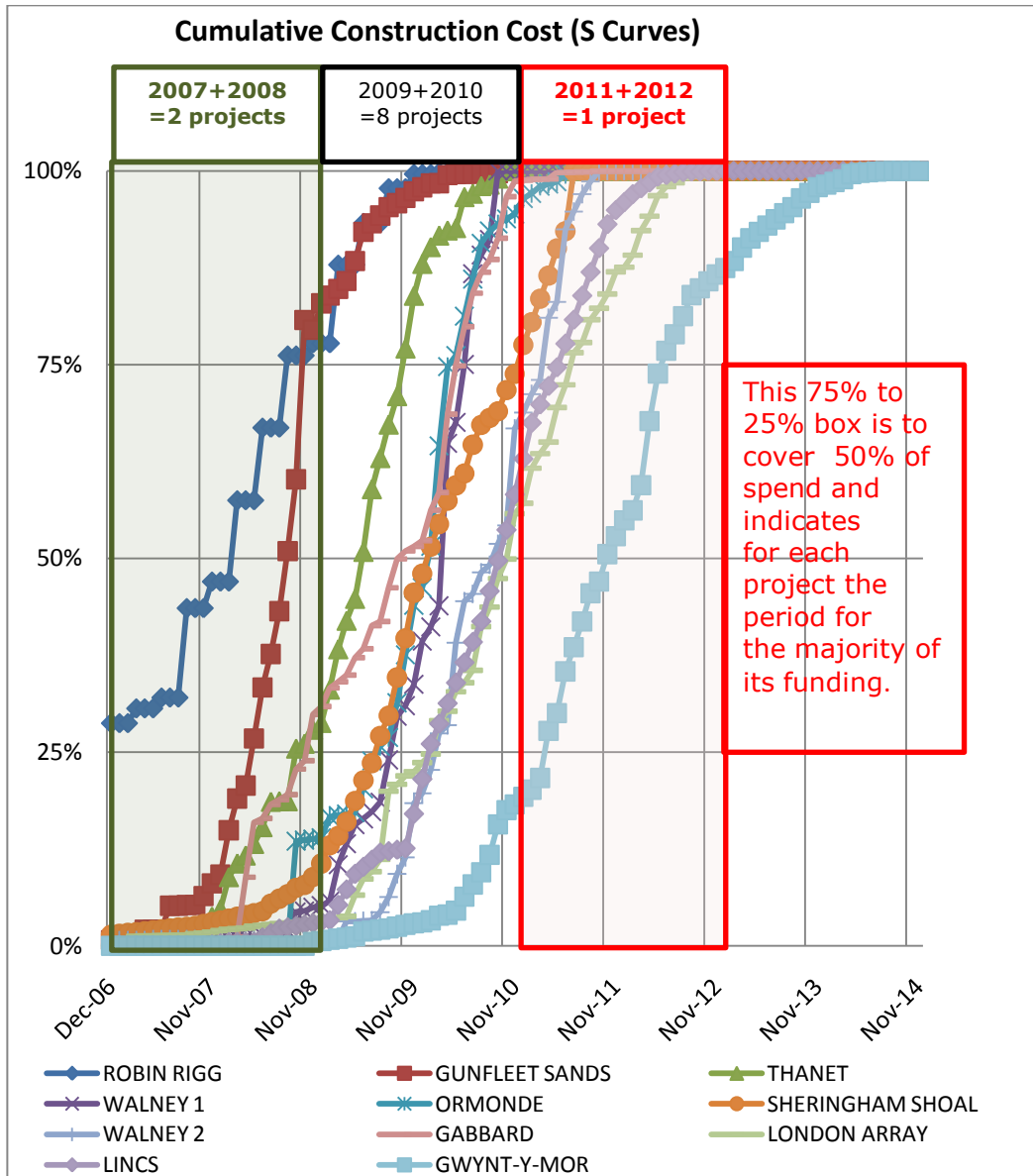
4.4. Actual project completion has tended to be slightly later mainly due to delays in installing the export cables. Consequently cash flows have also become more extended.

4.5. Figure 1 shows the cash flows (actual if completed and projected where not completed) for each project under construction (noting that Barrow was operational in 2006). The graph indicates that together with the first project (Barrow) just two other projects have the majority of their cash flow pre 2009. Furthermore for five out of the nine projects in TR1 the majority of the project cash flow was post 2009 and thus not in the 2005 to 2009 period examined by E&Y when making their recommendation. Consequently it is appropriate to reconsider the cap applicable to such projects. Instead the period 2009 and

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2010 examined by GT contains the majority of the project cash flow for six out of the nine projects in TR1 and two out of the three projects in TR2 Tranche A. In contrast one out of the three projects in TR2 Tranche A will have the majority of its cash flow in 2011 and 2012 which is outside the periods examined.

Figure 1: Cumulative construction cost (S curves)\*



\* The number of projects with the majority of their expenditure in each of the time periods is stated above the graph.

Source: GT report

4.6. There are a number of implications; the timing of a project's spend commonly straddles a relatively long period during which the costs of capital may change unpredictably. Which transitional round a project is in is not highly relevant to the IDC (ie the timing of the cash flow of most of the transitional project overlap).

### **Calendar year based period**

4.7. Our minded-to approach is to use a calendar year based period. This means that the same cap announced by Ofgem applies to any qualifying IDC costs incurred during a certain calendar period; for all TR1 and TR2 projects irrespective of which round, from the date of implementation until Ofgem announces a new cap or approach. This is because our analysis will always be based on historic data and therefore can only be completed afterwards. The frequency of review will depend on any major financial market movement that impacts upon the costs and availability of capital which make them differ from the level when the current cap was set.

4.8. The advantage of this approach is that it follows the principle of closely matching IDC costs to the time those costs are incurred. From a business perspective, it may be considered that this matching approach is commercially sensible and therefore fair. In addition this approach is simple to administer.

4.9. We acknowledge this approach does have the disadvantage of not being able to closely reflect project-specific risks. However we do not consider that there is evidence that financing costs should vary materially between projects on a project specific basis rather than as indicated in our financial advisers' evidence.

4.10. We also considered alternative approaches, in particular; a transitional round based period and a project based period.

#### *Alternative approaches*

4.11. A transitional round based period approach involves a specific IDC cap being applied to any projects in a specific round. This means that there will be up to three rates (ie for TR1, TR2 Tranche A and TR2 Tranche B respectively).

4.12. This is a reasonable approach if the developers in the same round raised and competed for capital at the same time. However, according to the evidence presented above, this is not the case. Based on the expert evidence by our financial advisers, we consider that the recommended ranges of IDC cap are relevant.

4.13. A subset of this approach is a project based period approach. However, we cannot verify that differences in efficient financing costs between projects are attributable to the projects having different risk profiles.

4.14. For the reasons outlined in this section we are not minded-to use these alternative approaches.

## Ofgem's minded-to approach

4.15. It will always be the case that in examining historic data any conclusion could be implemented from a retrospective date. Ideally the proposed IDC cap of 7.6 per cent should be implemented promptly to replace the existing cap of 10.8 per cent which is no longer relevant to the current and foreseeable market conditions.

4.16. However having also considered the industry may need some time to prepare for the change, **the Authority is minded to implement the cap from 1 September 2011** and apply it to existing TR1 projects (to the extent that they are still under construction) and all TR2 projects.

## 5. Our Current View

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### Chapter Summary

This chapter summarises the Authority's minded-to approach in respect of IDC.

### Question box

**Question 1: Do you agree with the minded-to view expressed?**

**Question 2: Please can you indicate any alternative views you hold and the reasons for these?**

### Position Summary

5.1. In Chapter 1 we set out the background to this consultation including the legal background and context.

5.2. In Chapter 2 we indicated our general approach to assessing IDC costs and the process of determining the applicable IDC rate cap for TR1 projects to date. This included the IDC rates that developers requested and the expert advice we collected, as well as changes in the financial market conditions and the implications of those changes for the IDC rate to transitional projects in TR1 and TR2. It set out our minded-to approach to retaining the cap to put a limit on the IDC rate for transitional projects to protect customers. We asked respondents whether they agree it is appropriate to limit the rate by applying a cap.

5.3. In Chapter 3 we indicated that the range of interest rate requested by developers was wide on both tender rounds. For TR2 projects the top of the range was well above the 10.8 per cent indicated as appropriate for TR1 projects by our advisers. This was despite such projects being capable of obtaining substantial debt funding, for instance from the EIB, which should have resulted in rates below rather than above the range. We also indicated that debt funding levels were substantially higher for both existing and new transmission companies than those applicable to the traditional energy companies used as comparators by our advisers. We asked whether our minded-to use of the bottom of the range was appropriate.

5.4. In Chapter 4 we indicated that most projects in the first tender round had the majority of their cash flow after the period examined by E&Y for TR1. Instead it was in the same calendar period examined for the next tender round, TR2 Tranche A. We asked for views on whether it would be appropriate to apply any caps to specific calendar periods.

5.5. We noted that on the basis of known and forecast information available at that time, we had previously decided that a cap at 10.8 per cent would apply to relevant projects, but it had subsequently become apparent that new information was available. Consequently ***the Authority is minded-to apply the new cap from the bottom of the range proposed by GT, 7.6 per cent, from 1 September 2011 following this consultation.*** We will review our approach to IDC (the rate, the cap, the date) from time to time and our approach to application may change in the future as market information on potential funding costs changes.

# Appendices

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# Appendix 1: Consultation Response and Questions

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1.1. Ofgem would like to hear the views of interested parties in relation to any of the issues set out in this document. **We would especially welcome responses to the specific questions** set out at the beginning of each chapter heading and replicated below.

1.2. Responses should be received by 12 August 2011 and should be sent to:

**Philip Cope, Offshore Transmission - Finance**  
**Ofgem, 9 Millbank, London SW1P 3GE**  
**0207 901 7941**  
[Philip.Cope@ofgem.gov.uk](mailto:Philip.Cope@ofgem.gov.uk)

1.3. Unless marked confidential, all responses will be published by placing them in Ofgem's library and on its website [www.ofgem.gov.uk](http://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.

1.4. Respondents who wish to have their responses remain confidential should clearly mark the document/s to that effect and include the reasons for confidentiality. It would be helpful if responses could be submitted both electronically and in writing. Respondents are asked to put any confidential material in the appendices to their responses.

## **CHAPTER: Two**

**Question 1:** Do you agree that it is appropriate to retain a cap to put a limit to developer's claims on financing?

**Question 2:** Do you agree to the general approach to determining the allowable IDC as set out in paragraphs 2.1-2.8?

## **CHAPTER: Three**

**Question 1:** Do you agree we should set the cap on IDC for transitional projects at the bottom of the range set out by our advisers, ie 7.6 per cent?

## **CHAPTER: Four**

**Question 1:** Do you agree with our proposed approach? If not, why?

**Question 2:** Are there any other alternative we have not considered? If yes, please set out the details?

**Question 3:** Do you agree to the proposed date of implementing our minded-to changes set out in this consultation document?

## **CHAPTER: Five**

**Question 1:** Do you agree with the minded-to view expressed?

**Question 2:** Please can you indicate any alternative views you hold and the reasons for these?



## Appendix 2: Glossary

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### **A**

#### Authority

The Gas and Electricity Market Authority<sup>7</sup>

### **D**

#### DECC

Department of Energy and Climate Change

### **E**

#### E&Y

Ernst & Young

#### EIB

European Investment Bank

### **G**

#### GT

Grant Thornton

### **I**

#### IDC

Interest During Construction

#### ITT

Invitation to Tender

### **O**

#### OFTO

Offshore Transmission Owner

### **T**

#### TR1, TR2

Transitional Tender Round 1, Transitional Tender Round 2

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<sup>7</sup> The Gas and Electricity Markets Authority is the regulator of gas and electricity markets in Great Britain. Ofgem is the Office of Gas and Electricity Markets, which supports the Authority in performing its statutory duties and functions. Whilst the terms “Ofgem” and “the Authority” are used interchangeably in this consultation, it is the Authority which is responsible for exercising the relevant statutory powers.”

## Appendix 3: Feedback Questionnaire

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1.1. Ofgem considers that consultation is at the heart of good policy development. We are keen to consider any comments or complaints about the manner in which this consultation has been conducted. In any case we would be keen to get your answers to the following questions:

1. Do you have any comments about the overall process, which was adopted for this consultation?
2. Do you have any comments about the overall tone and content of the report?
3. Was the report easy to read and understand, could it have been better written?
4. To what extent did the report's conclusions provide a balanced view?
5. To what extent did the report make reasoned recommendations for improvement?
6. Please add any further comments?

1.2. Please send your comments to:

**Andrew MacFaul**

Consultation Co-ordinator

Ofgem

9 Millbank

London

SW1P 3GE

andrew.macfaul@ofgem.gov.uk