Neutral citation [2025] CAT 68

IN THE COMPETITION APPEAL TRIBUNAL

Case Nos: 1440/7/7/22
1518/5/7/22

Salisbury Square House
8 Salisbury Square
London EC4Y 8AP

30 October 2025

Before:

THE HONOURABLE MR JUSTICE RICHARDS
(Chair)
ANDREW LENON KC
PROFESSOR ANTHONY NEUBERGER

Sitting as a Tribunal in England and Wales

BETWEEN:

CLARE MARY JOAN SPOTTISWOODE CBE

Class Representative

– v –

(1) NEXANS FRANCE SAS
(2) NEXANS SA
(3) NKT A/S (formerly NKT HOLDING A/S)
(4) NKT VERWALTUNGS GMBH (formerly NKT CABLES GmbH)
(5) PRYSMIAN CAVI E SISTEMI SRL
(6) PRYSMIAN SPA

Defendants

AND BETWEEN:

(1) LONDON ARRAY LIMITED
(2) RWE RENEWABLES UK LONDON ARRAY LIMITED (formerly known as E.ON CLIMATE & RENEWABLES UK LONDON ARRAY LIMITED)
(3) ORSTED LONDON ARRAY LIMITED (formerly known as DONG ENERGY LONDON ARRAY LIMITED)

~~**(4) GREENCOAT LONDON ARRAY LIMITED (formerly known as ORSTED LONDON ARRAY II LIMITED (formerly and prior to that known as DONG ENERGY LONDON ARRAY II LIMITED)**~~
(5) MASDAR ENERGY UK LIMITED

Claimants

- v -

(1) NEXANS FRANCE SAS
(2) NEXANS SA

Defendants

Heard between 20 May and 5 June 2025

JUDGMENT (ROC ISSUES)

APPEARANCES

Ben Lask KC, Gerard Rothschild and Jamie Farmer (instructed by Scott + Scott UK LLP) appeared on behalf of the Class Representative.

Colin West KC (instructed by Hausfeld & Co. LLP) appeared on behalf of the London Array Claimants.

Tony Singla KC and Paul Luckhurst (instructed by White & Case LLP) appeared on behalf of Nexans France SAS and Nexans SA.

Helen Davies KC and Fiona Banks (instructed by Macfarlanes LLP) appeared on behalf of Prysmian Cavi E Sistemi S.r.l. and Prysmian S.p.A.

Daniel Carall-Green (instructed by Addleshaw Goddard LLP) appeared on behalf of NKT Verwaltungs GmbH and NKT A/S.

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A. INTRODUCTION

1. By Order made on 22 May 2024 the Tribunal directed that certain issues (the "**ROC Issues**") arising in both the proceedings (the "**London Array proceedings**") brought by London Array Limited and others (together "**London Array**" or the "**London Array Claimants**") against Nexans France SAS and Nexans SA (together "**Nexans**") and the collective proceedings (the "**Spottiswoode proceedings**") brought by the Class Representative against Nexans and other power cable manufacturers on behalf of a class of domestic consumers of electricity should be tried in a single hearing attended by the parties to both sets of proceedings. This judgment follows the trial of the ROC Issues.

2. The ROC Issues arise in the following way. Both the London Array proceedings and the Spottiswoode proceedings are concerned with an alleged overcharge in the price of subsea power cables following on from the Decision of the European Commission (the "**Commission**") dated 2 April 2014 in Case AT.39610, Power Cables (the "**Commission Decision**") that a number of cable manufacturers had been involved in a long-running cartel affecting high-voltage power cables between February 1999 and January 2009 (the "**Cartel**").

3. In the Spottiswoode proceedings, the Class Representative's case is that purchasers of high-voltage power cables, including electricity transmission and distribution companies in Great Britain and offshore windfarms, paid increased prices for such cables (including associated works and services) as a result of the Cartel. She argues that this overcharge has been (and continues to be) passed on to electricity suppliers through the charges which transmission and distribution companies levy on suppliers and via payments made by suppliers in respect of offshore windfarms pursuant to the United Kingdom ("**UK**") Government's scheme known as the Renewables Obligation scheme (the "**RO scheme**"). She goes on to allege that the overcharge was passed on by electricity suppliers to the billpayers whom she represents. The Spottiswoode proceedings are thus claims for "follow-on" damages brought on behalf of UK electricity billpayers generally against a number of members of the Cartel.

4. The London Array proceedings are claims for follow-on damages brought by various companies associated with the London Array windfarm project against Nexans only, arising out of the supply of power cables used at the London Array windfarm. In the London Array proceedings, the position of both London Array and Nexans is that any loss suffered by London Array would *not* have been avoided or passed on as a result of higher levels of subsidies under the RO scheme and/or higher prices for the sale of electricity. However, Nexans's position is that the Tribunal should treat the issue of pass-on under the RO scheme as a common issue across both sets of proceedings to avoid the risk of inconsistent judgments. The Tribunal has accepted that and has made case management directions to the effect that London Array should not be entitled to obtain final judgment in its favour until that part of the Class Representative's claim relating to alleged pass-on of any overcharge paid by London Array to Nexans has been determined. That avoids potential injustice to Nexans who might otherwise be required to "pay twice" in respect of loss allegedly caused by the same overcharge.

5. The trial of the ROC Issues took place immediately after the trial of the London Array proceedings. Judgment in the London Array proceedings was published on 10 October 2025 ([2025] CAT 59). The trial of the Spottiswoode proceedings will take place at a later date following determination of the ROC Issues. Given that the extent of any overcharge paid by London Array and other purchasers of cables has yet to be determined in the Spottiswoode proceedings, the issue of whether there was any overcharge and, if so, the size of the overcharge, has been approached for the purpose of the trial of the ROC Issues on a hypothetical basis.

6. The four ROC Issues, which are set out later in the judgment, are concerned with the way in which the UK Government decided to set the banding for offshore wind generators at 2 Renewables Obligation Certificates ("**ROCs**") per megawatt-hour ("**MWh**") for the purposes of the Renewables Obligation (Amendment) Order 2010 ("**ROO10**") and whether its decision was affected by the alleged overcharge.

7. Prior to the ROO10, the Government commissioned Ernst & Young LLP ("**EY**") to analyse the costs and revenue drivers and financial support needed for offshore wind projects in the UK. EY produced a report on these matters (the "**EY Report**"), using data obtained from a number of "benchmark" windfarms, which informed the Government's banding decision.

8. The main focus of the trial was the second of the four ROC Issues ("**Question 2**") which asks whether, assuming the prices paid by the benchmark windfarms for subsea power cables were increased by a hypothetical 26% overcharge (the "**Overcharge**"), the Overcharge would have made any difference to the Government's banding decision. The Class Representative's case was that the Overcharge did make a difference and that, in the absence of the Overcharge, the banding level applicable to offshore windfarms would have been less than the 2 ROCs/MWh actually awarded under ROO10. Since the parties are agreed that the more ROCs/MWh the Government awarded to offshore windfarms, the greater the cost of the ROC regime to UK electricity consumers (assuming all else remained equal), the Class Representative's case is that the presence of the Overcharge increased the number of ROCs issued which in turn increased the cost of electricity borne by consumers. The case advanced by London Array and the Defendants in the Spottiswoode Proceedings (collectively, the "**Aligned Parties**") was that the absence of the Overcharge would have made no difference to the banding level, essentially because any resulting reduction in the costs of the windfarms would have been too slight to have affected the banding decision. The Aligned Parties' position is, therefore that the Overcharge would not have increased the number of ROCs issued and thus the cost of electricity borne by UK consumers.

9. Determination of Question 2 entailed the construction of a counterfactual world in which the circumstances would have been as they actually were at the time of the ROO10 banding decision save that the subsea cable costs incurred by the benchmark windfarms would have been 26% lower than they actually were (the "**Counterfactual**"). We distinguish the Counterfactual from the "**actual**" world in which the Government reached its banding decision in the light of the actual costs of subsea cables that windfarms were paying or anticipated paying. In order to understand what difference, if any, a hypothetical reduction in costs

would have made, it was necessary to understand how the Government had actually reached the ROO10 banding decision. There was one witness of fact, Mr Hugh McNeal, who was not involved in that decision, although he did have knowledge of how the Government had approached a subsequent banding decision. The main source of evidence as to the Government's decision-making was contemporaneous documentation disclosed by the Government, including the EY Report, correspondence, and internal memoranda, which shed light on the information and factors relied upon by the Government when making its banding decisions. The chronology of the decision-making process was not disputed. The area of dispute was over the inferences to be drawn from the documentation as to the Government's approach to the ROO10 decision and as to what its approach would have been in the Counterfactual.

B. THE FACTS

(1) The RO scheme

10. The RO scheme is a subsidy scheme intended to encourage investment in renewable energy. The RO scheme gives windfarm developers and other generators of electricity from renewable sources subsidies which, in addition to revenues earned from the sale of electricity into the wholesale market, are intended to enable developers to cover their costs and earn a return. The RO scheme came into effect in 2002 and was closed to all new generators of capacity from 1 April 2017, although generators who were already supported under the scheme will continue to receive support until 2037.

11. Under the RO scheme, supported generators in each category of renewable generation receive a set number of ROCs per MWh of electricity they generate. Electricity suppliers are required to present a certain number of ROCs to the Office of Gas and Electricity Markets ("**Ofgem**") each year or else pay a fee into a "buy-out fund". Supported generators earn revenue by selling ROCs to suppliers that enable the suppliers to meet their obligations. The proceeds from the buy-out fund are divided among suppliers annually in proportion to the number of ROCs they have presented to Ofgem, providing incentives to purchase ROCs from generators and increasing the market value of ROCs.

Under the RO scheme, each qualifying windfarm would obtain an entitlement to be awarded ROCs each year for twenty years from the date of its accreditation. The costs of ROCs are ultimately passed to consumers through their electricity bills.

12. Pursuant to section 32D(4) of the Electricity Act 1989 (the "**Act**"), before making any banding provision in a renewables obligation order, the Minister was obliged to have regard to the following matters:

> "(a) the costs (including capital costs) associated with generating electricity from each of the renewable sources or with transmitting or distributing electricity so generated;
>
> (b) the income of operators of generating stations in respect of electricity generated from each of those sources or associated with the generation of such electricity;
>
> (c) the effect of paragraph 19 of Schedule 6 to the Finance Act 2000 (c. 17) (supplies of electricity from renewable sources exempted from climate change levy) in relation to electricity generated from each of those sources;
>
> (d) the desirability of securing the long term growth, and economic viability, of the industries associated with the generation of electricity from renewable sources;
>
> (e) the likely effect of the proposed banding provision on the number of renewables obligation certificates issued by the Authority, and the impact this will have on the market for such certificates and on consumers;
>
> (f) the potential contribution of electricity generated from each renewable source to the attainment of any target which relates to the generation of electricity or the production of energy and is imposed by, or results from or arises out of an EU obligation."

13. For the purposes of section 32D(4)(f), there was no specific target applicable to offshore wind. However, there was an overall target set for the UK by Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources of 15% of all energy to be provided from renewable sources by 2020.

(2) Introduction of banding

14. When the RO scheme was first introduced in 2002, under the Renewables Obligation Order 2002 ("**ROO02**") suppliers of renewable energy received one ROC per MWh regardless of the generation method.

15. Under the Renewables Obligation Order 2009 ("**ROO09**"), which came into force on 1 April 2009, the Government introduced a system of banding, allocating different technologies to five different bands depending on their state of development and using a range of bands from 0.25 to 2 ROCs/MWh with a minimum granularity of 0.25 ROCs.

16. Ahead of ROO09, the Government commissioned EY to estimate the levelised cost of energy ("**LCOE**") per MWh for a number of renewable technologies. In the EY Report, EY described levelised costs as "reflect[ing] the amount of electricity revenue per MWh … needed throughout the life of the technology to make the technology commercially viable". Put another way, if a hypothetical generator earned revenue per MWh equal to its LCOE, it would be earning enough both to cover its costs and earn a reasonable commercial profit. It was recognised that electricity generated from renewable sources would not actually generate sufficient revenue to cover that levelised cost. The difference between levelised cost and revenue actually earned was the subsidy that was to be provided by the RO scheme. As a shorthand we will, therefore, refer to a number of ROCs as "corresponding" to a particular estimate of levelised cost. So, for example, an award of 2 ROCs/MWh might be said to "correspond" to a LCOE of £144/MWh if awarding that generator 2 ROCs/MWh would, when put together with a generator's actual revenue, enable that generator to achieve revenue of £144/MWh and so cover its costs and make a reasonable commercial profit. Developing the point further, a LCOE of £144/MWh itself involved the making of assumptions as to what level of commercial return a generator should earn since that return was a component of LCOE. For example, a LCOE of £144/MWh might involve an assumption that the generator is earning a 12% rate of return in which case an award of 2 ROCs/MWh can also be understood as "corresponding" to a rate of return of 12% and a LCOE of £144/MWh.

17. In 2007 EY produced a LCOE analysis for the different technologies, taking into account their capital and operational costs. That analysis was then provided to Oxera Consulting LLP ("**Oxera**") to form the basis of their modelling work in respect of possible changes to the RO scheme. Oxera considered six scenarios, one of which adopted a separate band for each technology. The Government rejected the granular multi-band approach for the following reasons:

> "…this scenario is complex, and is more precise than it is really possible to be when predicting future costs. This banding regime is likely to require banding levels to be reset on a more frequent basis than one with fewer bands, introducing increased uncertainty for investors, and leading to Government trying to predict the market and pick winners, something consultation responses have strongly advised against."[1]

18. The Government's favoured option was the banding package with five bands which it considered allowed greater flexibility and reduced the need for frequent reviews of the banding structure and levels. In a consultation document published in May 2007 the Government explained its preference for the five bands as follows:

> "Our approach has been to assess the expected current and forward costs over the next few years for each of the technologies set out in our previous consultation document. We have found that these costs seem to fall into loose groupings which reflect at least in general terms the market and technological development that the technologies have reached to date. We are, however, also aware that there is a considerable degree of uncertainty over cost predictions, as has been evidenced in the movements in costs over the past two years since previous studies. For example the cost of wind generation has risen by over 20% mostly due to higher international demand driving increased prices for wind turbines. Given these uncertainties, the Government does not think it appropriate to make fine distinctions between the levels of support given to different technologies but rather to take groups of technologies and set support levels which reflect the general position of that group."[2]

19. Offshore wind, which was predicted to make the largest single contribution to renewable electricity in the UK by 2020, was in ROO09, grouped alongside dedicated biomass and co-firing of energy crops. They were all allocated 1.5 ROCs/MWh. The next band up was 2 ROCs which was awarded to emerging technologies such as wave, tidal stream, advanced gasification, and solar panels.

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[1] Paragraph 33 of 'Renewables Obligation – Impact Assessment to be laid in Parliament 23 January 2009'.
[2] DTI document "Reform of the Renewables obligation" dated May 2007.

There were also bands of 0.25, 0.5 and 1.0 applied to other, more mature technologies.

20. In December 2008 the Government published its response to the statutory consultation on the proposed banding. Looking ahead to future banding levels, it noted as follows:

> "As previously proposed, future decisions on changes to bands will be taken by the Secretary of State (SoS) based on independent advice. Independent consultants will be appointed to provide advice on future banding levels on similar lines to that conducted prior to the decisions made on the bands to be introduced from 1st April 2009."

21. The RO scheme constituted state aid for the purposes of Article 87 of the Treaty Establishing the European Community (the "**EC Treaty**") (now Article 107 of the Treaty on the Functioning of the European Union), so the Government was bound to set support at a level that avoided overcompensation in order to obtain state aid clearance. This meant ensuring that the revenues afforded to generators under the scheme did not exceed costs, including a reasonable return. The Government's banding decision had to be notified to the Commission and would have been prohibited if the Commission had found it to be incompatible with the internal market.

22. Following initial notification, by a letter to the Commission dated 25 November 2008 the Government provided clarification on certain points as follows:

> "Renewables projects even for a single technology type face a range of costs depending on their location, the market for the capital equipment and the availability of the resource (whether determines [sic.] by e.g. wind speed or the price for biomass fuels). Given the range of variables, matching revenues to costs is an uncertain process. Predicting the costs and revenues of future projects is even more challenging.
>
> […]
>
> The costs that were used to set the banding regime were for the most part those in the Ernst and Young report. These reflected the range of costs that is [sic.] was believed would need to be covered if the UK was to hit its declared aspiration to achieve 20% of electricity from renewable sources…. In order to be certain of achieving this target we would have needed to set bands which delivered revenues at the top of the quoted cost range for each technology. In practice we decided that to avoid over-subsidy, and given the uncertainties in costs, we would set the revenue closer to the mid-point of the range.
>
> […]

> In proposing a banding regime, we aimed for a level of support towards the middle of the range of costs (for projects beginning in 2010) for those key technologies which we expected to deliver substantial volumes up to 2015. We did not attempt to subdivide the technologies or to try and match the level of support very closely to arbitrary points on a supply curve as we believe that the uncertainties of future technology costs and electricity prices are such that this degree of precision would be unlikely to be met in practice."

23. Mr Michael Duggan, head of the RO scheme at the Department of Energy and Climate Change ("**DECC**") recorded in a paper dated 15 December 2008 that the Commission was concerned about the possibility of overcompensation for offshore wind:

> "Commission identified offshore wind as a specific case where they had some concerns. These are largely based on the perception that onshore wind projects are already over-rewarded. The spread of costs for onshore wind is large. Our response argued that the move to banding will reduce the value of the ROC as more generation comes on stream and that the level of support was well within the spread of costs."

24. In a subsequent internal email exchange dated 2 July 2009, DECC officials reported that the Commission's concern about overcompensation of offshore wind almost prevented approval being given:

> "When we were getting state aid approval for the [ROO09] the Commission were particularly concerned about overcompensation. They were very keen to ensure we were not giving companies more support than they need and paid a lot of attention to mechanisms - such as qualifying dates for support, grant repayment and banding decision making process - specifically focussed at avoiding overcompensation. Indeed, Commission Legal Services almost prevented approval being granted due to concerns they had about overcompensation of some technologies, including offshore wind."

25. In an email to the Commission dated 29 January 2009, the Government described the banding regime as "set to match the costs within the range for which we have evidence".

26. By a letter dated 11 February 2009, the Commission informed the Government that it had decided to raise no objections to the introduction of a banding mechanism. The letter set out ranges for predicted costs and revenues for different technologies. The Commission acknowledged the difficulty in establishing precise forecasts of production costs and revenue streams:

> "66. The Commission understands how difficult it might be to establish precise forecasts of production costs and revenues streams for all renewable

> technologies eligible under the scheme for the time period envisaged. The in-depth studies commissioned by the UK authorities to independent consultancies help to model the most accurate forecast of the related data.
>
> 67. The Commission also recognises the choice of the UK authorities to set bands which delivered revenues close to the mid-point of the ranges for each technology in order to avoid over-subsidy."

27. The letter's conclusion was that the notified measure was compatible with the provisions of the Commission's Community Guidelines on State Aid for Environmental Protection and therefore with the provisions of Article 87(3)(c) of the EC Treaty.

28. The Class Representative places emphasis on paragraph 83 of the Commission's letter of 11 February 2009, which records the Government's position that "future reviews of the banding regime will ensure that differentiation between banding for technologies will be based on modelling of the cost structure for each technology". We do not consider, however that this represented an assurance by the Government that any future review would link the number of ROCs issued following future banding reviews with pinpoint precision to estimates of costs. The Government was in no position to offer such an assurance since precise estimates of costs were not practicable. Paragraph 83 of the letter, therefore, simply records an assurance that some modelling exercise would be undertaken as part of any further review of banding.

(3) 2009 review of banding

29. Under the terms of ROO09, banding reviews were to take place every four years but early reviews were permitted in certain circumstances, including where the costs of generating electricity for at least one of the technologies under the scheme "are significantly different from the costs of generating electricity in that way to which the Secretary of State had regard when making the banding provisions".

30. In November 2008 a number of windfarm developers made their concerns known to the Government as to the viability of their projects, suggesting an increase in support from 1.5 to 2 ROCs/MWh. In a ministerial submission dated 11 March 2009, Mr Duggan, a DECC official, stated as follows:

> "9. In late November, EON, DONG and Masdar raised specific concerns about the economic viability of the London Array 660/1000 MW offshore wind farm at a meeting at No. 10 and in the media. DONG has separately raised similar concerns about their 650 MW Walney offshore wind farm, as have Centrica (250 MW Lincs). These issues have been raised in your weekly credit crunch briefs and in separate submissions on these specific projects. These developers have all clearly stated that unless additional financial support is provided, the current IRRs do not meet their hurdle rates and the projects will be postponed or sold. The developers have suggested increased support from the RO to 2 ROCs/MWh —but they have also stated that depending on the cost gap other mechanisms, such as grant support or tax breaks, might meet their needs."

31. At a meeting with DECC on 16 February 2009, Centrica Plc ("**Centrica**") cited significant increases in turbine costs and suggested, in relation to the Lincs windfarm project, that giving the project 2 ROCs would make it economic, providing an internal rate of return ("**IRR**") of 12.5% over 20 years which would be acceptable to its Board. In response, the DECC representatives made the point that the Commission focused closely on potential overcompensation and that the Government would need to get state aid clearance for the increase to 2 ROCs. DECC's note of the meeting also recorded that Centrica's costs "seem to be worse case scenario and – perhaps unsurprisingly – they appear to have left themselves a fair safety margin."

32. In response to the developers' concerns, in December 2008 the Government commissioned EY to carry out a study of the cost of and financial support for offshore wind. No other analysis of costs was commissioned in the context of the Government's consideration of increasing support to offshore wind. The Government did not carry out its own quantitative analysis of costs. However, as will be seen, the Government did bring to bear its own views on developers' likely revenue from the generation of electricity and was alive to the possibility of developers "gaming" the ROC scheme. It is to be inferred that the Government considered that the EY Report, which drew on EY's proprietary data in estimating developers' costs and revenue, provided some protection against that risk.

33. As shown by EY's response to DECC's invitation to tender dated 9 January 2009, one of the seven "key questions" to be addressed by EY in its study was as to the impact which further banding for offshore wind up to 2 ROCs/MWh would have on rates of return, deployment rates and expected revenues. There

is no evidence of any other increase being contemplated at that time. As stated in EY's response to DECC's invitation to tender:

> "We would propose to, using our post-tax product cash flow model, look at the economics of a typical offshore wind project (key project assumptions to be discussed and validated by DECC) operating under a 2 ROCs/MWh regime. Outputs from our economic analysis will be Internal Rate of Return (IRR) and expected revenues. This analysis will again require DECC to provide the relevant wholesale power, ROC and LEC forward curves."

34. EY started their study in January 2009. An internal DECC email exchange on 13 February 2009 reported on a meeting with EY in which EY asked about what hurdle rates to use. Mr Duggan's response to the report was that London Array were looking at 10-11%, E.ON Energy ("**E.ON**") 10%, and Masdar 11%. He stated that DECC's previous view on hurdle rates was taken from a previous EY report, which may have been 12%.

35. In the submission to ministers dated 11 March 2009 referred to above, Mr Duggan reported on the need to increase support offered to offshore wind under the RO scheme. He noted that the cost analysis by EY suggested that offshore wind projects on current costs were much more expensive than previous figures suggested and that they would not proceed on developers' timelines without additional support. The submission included the following:

> "11. While E&Y have not finalised their report, we are able to summarise their findings. The key metric is the 'levelised cost', the cost per MWh of generation taking account of both capital and operating costs. This is the cost that needs to be covered by revenues — principally the sale of electricity and Renewables Obligation Certificates (ROCs). The key points are:
>
> - Average levelised costs for offshore wind projects have risen from
> - £91/MWh for a project built in 2006; to
> - £144/MWh for a project being contracted now (average of six projects).
>
> - The great majority of this cost is attributable to the capital expenditure in building the station in the first place. The capital cost per MW installed has risen from:
> - £1.6m/MW for a project built in 2006; to
> - £3.2m/MW for a project being contracted now."

36. The submission went on to consider the case for investigating options for additional support to offshore windfarms in the short term. It mentioned again

the fact that the developers who had sought additional support under the RO scheme had suggested raising the banding level to 2 ROCs/MWh and that EY had investigated how sensitive the economics of the projects were to certain assumptions and expected revenues. DECC officials summarised and commented on the EY Report as follows:

> "18. […]
>
> - Based on the cost analysis and central revenue assumptions, current projects would require 2.5 ROC/MWh to achieve a hurdle rate of 12% post-tax nominal (approx 10% post-tax real). Centrica tell us that their hurdle rate is 12.5%.
>
> - Reducing the nominal hurdle rate to 10% reduces the required support to 2 ROC/MWh.
>
> - Taking a more aggressive view of future revenues can reduce banding requirement to 2 ROC/MWh. The E&Y central case assumes long-term wholesale power price of £60/MWh which is broadly consistent with current independent analyst forecasts, £80/MWh is the level required to reduce banding to 2 ROC/MWh. Our own latest projections from the DECC energy model (using the unpublished UEP35 run) have central estimate wholesale power prices at £76/MWh in 2009 rising to £99/MWh by 2025. However, current year-ahead prices are £40-45/MWh. It is also possible that the developers hope to produce more power per turbine estimates they have told us.
>
> - Most developers have claimed that they are assuming that the new offshore transmission (OFTO) regime will be revenue neutral. We believe that the regime will be revenue positive. Attracting EIB funding to support the regime could help deliver a lower cost of capital than for onshore grid assets. We have had a positive expression of interest from the EIB for making funding available for the first tenders - and ourselves and Ofgem are in discussion with the EIB to secure this funding. By reducing the cost of capital for these regulated assets our proposed regime will produce a net saving to the developers - and transfer the grid costs to Opex. This could reduce banding requirement by up to 0.25 ROC/MWh. The outcome of this will become clearer later this year as the tender for the OFTO contracts progresses.
>
> 19. In conclusion we believe that there are reasons to believe that 2 ROC/MWh would be sufficient to make these projects economically viable. There are other possible support mechanisms which could have the same impact […]."

37. The submission presented three options: (i) do nothing; (ii) wait until the outcomes of the current re-tendering exercises were known; or (iii) offer additional support under the RO scheme. The third option was particularised as:

> "24. […] our most obvious lever and could provide the additional revenue to meet the developers' need. We would not be able to make this change with immediate effect as the Renewables Obligation Order 2009 has already been laid before Parliament. We would need to make statements about our intention to increase support with effect from April 2010 (note that none of these projects will start generating until 2011 at earliest).
>
> 25. This is not a risk free option. An increase in support would increase the cost of the RO to consumers. Preliminary analysis is that the additional cost would be up to some £4bn (discounted) between 2011 and 2030, around 4% of total RO costs. We have previously estimated that extending the RO might add 9-15% to consumer prices (£32-53 p.a. to average bills) in 2020-24 without this change. Responding to price hikes might send an indication that we can be held to ransom by the supply chain or developers […]."

38. The submission made clear that the Government considered a range of offshore windfarms could be impacted by increased support, including ones at West of Duddon Sands and Gwynt-y-Môr. In an email dated 13 March 2009, Katherine MacNeill of DECC listed seven offshore windfarms which would likely be eligible for support.

39. Meetings took place with E.ON, DONG Energy and Masdar (all of whom reacted positively to the proposed increase), and RWE Npower Plc ("**RWE**"), the developer of Gwynt-y-Môr. At a meeting on 16 April 2009, RWE shared its experience of significantly higher costs and stated that 2 ROCs/MWh would not be sufficient to make that project viable which required 2.5 ROCs/MWh. In an email dated 16 April 2009, commenting on the meeting, Mr Duggan noted that, reading between the lines, RWE's hurdle rate was around 10-11%. He continued:

> "Personally given that others seem to be content with 2ROC/MWh I see no reason to go to 2.5. We cannot need every project to go ahead as long as enough get away to support momentum in industry."

40. The response from Chris Barton, Acting Director, Renewables, Energy and Innovation was as follows:

> "Thanks. This is clearly not good news but if anything it further bolsters the arguments in favour of what we're envisaging, ie review of banding. I fully agree with your scepticism on likely appropriateness of going to 2.5 - and we [shouldn't] give any indication of willingness to go to that level now - but the final level of banding we want to go for will need to be determined in light of the review."

41. As well as pressure from developers, the Government was under pressure from the Treasury to minimise consumer costs. In a letter dated 22 April 2009, Angela Eagle MP, the Exchequer Secretary to the Treasury, wrote to the Minister at DECC as follows:

> "I agree with you that it is very important that planned investment in this sector continues to ensure that the supply chains are well placed to deliver the significant investment we will need to meet our 2020 renewable energy targets. We will announce, as part of the Budget, the review of support and the intention to increase the banding level from 1.5 to 2 ROCs.
>
> However I note that your analysis shows this increases costs to consumers by around £2.5- 3.5bn over the lifetime of these developments. These costs will feed through at a time when a number of other costs, including the renewable heat incentive and feed-in-tariffs, will also be putting pressure on bills. It is therefore important that all these mechanisms are designed with maximum efficiency so as to minimise these costs."

(4) The EY Report

42. EY submitted its Report on 27 April 2009. That followed a process in which there were at least three interim meetings between EY and the Government to discuss progress and issues that were arising as the Report was being compiled. In the executive summary, EY set out the methodology and conclusions as follows:

> "**Methodology**
>
> This work was based on publicly available information, project information obtained by DECC, Ernst & Young proprietary data (where it has been legally possible to share it) and discussions with DECC's Steering Committee. The study involved the following key tasks:
>
> - Establishing an estimate of the current cost for offshore wind (for both capital and operating expenditure) for projects at or near financial close as of January 2009.
>
> - Examining the material capital and operating costs and relying on publicly available analysis (see Appendix A) to identify their respective cost drivers (i.e. labour, commodities, steel, water depth, distance from shore). This analysis formed the basis for much of the qualitative discussion contained in this report.
>
> - Applying projections for capacity deployment for offshore wind in the UK (see Appendix C), which influences the rate of cost reduction associated with industry learning. Learning rates are applied to current costs to show the possible effects of increased industry experience on project costs.

- Using estimated current and future project costs (calculated in January 2009 real terms), a discounted cash flow model was used to derive levelised costs for projects reaching financial close in 2009 and 2015 respectively.

- On the basis of a range of estimates for forward wholesale power and ROC revenue curves, the model was used to calculate the level of RO banding required to meet specific rates of return (10% post-tax real in the Base Case)."

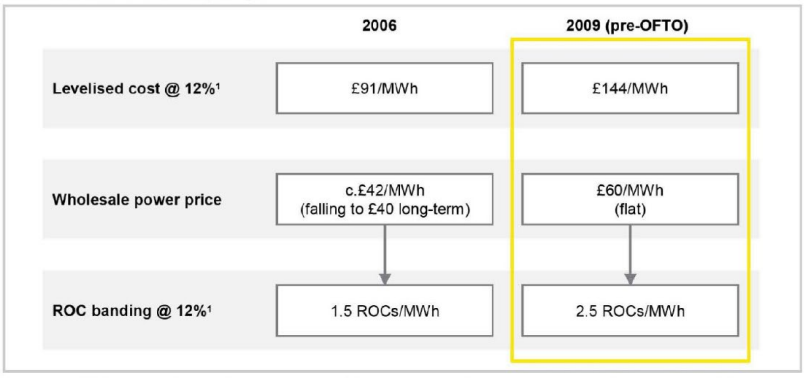
43. EY's calculation of a single levelised cost was based on average capital cost figures derived from six projects. The capital costs depended on, amongst other things, the distance from the windfarm to the shore. EY was necessarily engaged in a degree of modelling and approximation of a typical cost. EY worked with information they had from benchmark windfarms, but also brought to bear proprietary information that they had on two other windfarms. EY did not identify which windfarms it included.

44. The EY Report set out a base case showing that 2.5 ROCs would correspond to a LCOE of £144/MWh and a 12% post tax nominal rate of return in the sense set out in paragraph 16 above (see Figure 10 below).

4.2 Support required (Base Case)

Figure 10: Level of RO banding required to achieve a 12% post-tax nominal rate of return

Source: DECC, Ernst & Young analysis



1. *April 2006 RO Banding work was based on 12% pre-tax real. This analysis was performed using 10% post-tax real. Both approximate to around 12% post-tax nominal.*

45. EY performed sensitivity analyses on some of the assumptions underpinning its base case including investor rate of return (shown below), revenue, net power exported, offshore transmission ("**OFTO**") rate of return and the effects of industry learning and supply chain easing. Section 4.3.1 set out a sensitivity analysis on the rate of return (see Figure 11 below):

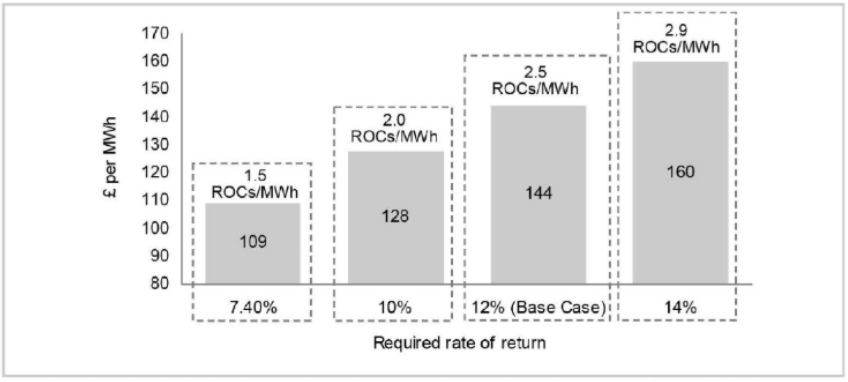
4.3 Sensitivities

4.3.1 Required rate of return

Figure 11 illustrates the sensitivity of levelised cost and RO banding levels to the assumed project discount rate.

Figure 11: Levelised cost and RO banding required to deliver a specified IRR[1]

Source: Ernst & Young analysis



1. *Note that all modelling has been performed using post-tax real discount rates. Post-tax nominal rates are approximated by adding 2% to all post-tax real numbers.*

Under the current RO banding level of 1.5 ROCs per MWh, project developers would need to accept a rate of return of around 7.4%, based on the Base Case assumptions.

This study was conducted using a discount rate 12%, as used in EY's 2007 analysis, and found that support under the RO would need to increase to 2.5 ROCs per MWh to provide sufficient support to offshore wind projects at or near financial close in January 2009.

Other sensitivities with different input assumptions have also been run which give different levels of support.

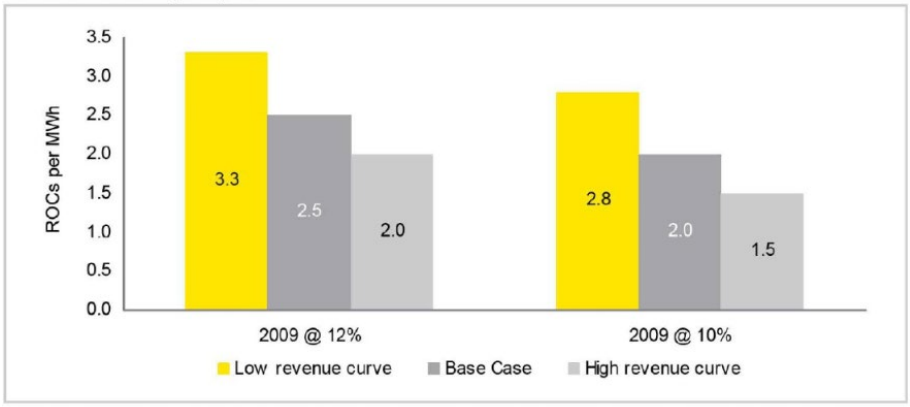
The graph depicts a strong impact of rate of return on the level of support required. Cost of capital may be reduced by risk mitigation, industry learning and a slackening of the cost of debt for developers; this may result in a lower level of ROC support required.

46. The choice of increments in this diagram was explained in the Confidential Annex to the EY Report (the "**EY Annex**") on the basis that the 2 ROCs bar reflected the fact that the industry was lobbying for 2 ROCs/MWh. The 2.9 ROCs bar reflected the 14% maximum rate of return previously accepted by the Commission for state-aid clearance.

47. The EY Report also included the following diagrams showing the banding required to deliver different revenue curves, different export assumptions and different OFTO return requirements:

Figure 13: RO banding required to deliver a specified IRR with different revenue curves[1]

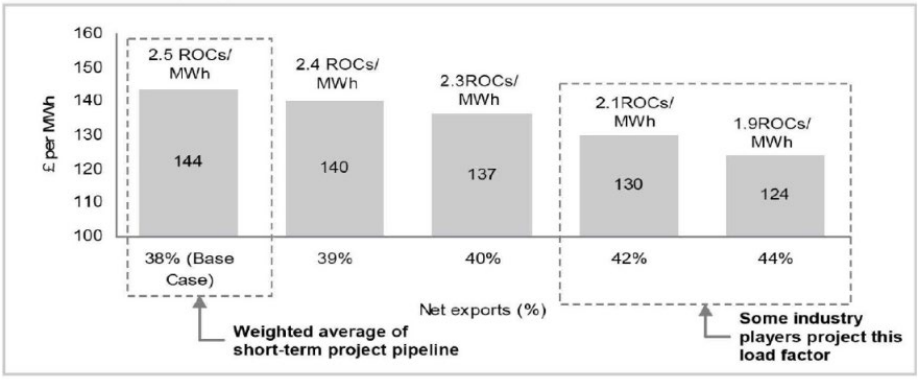
Source: Ernst & Young analysis



1. *Post-tax nominal. Note that all modelling has been performed using post-tax real discount rates. Post-tax nominal rates are approximated by adding 2% to all post-tax real numbers.*

Figure 14: Levelised cost and RO banding required under different net export assumptions[1]

Source: Ernst & Young analysis

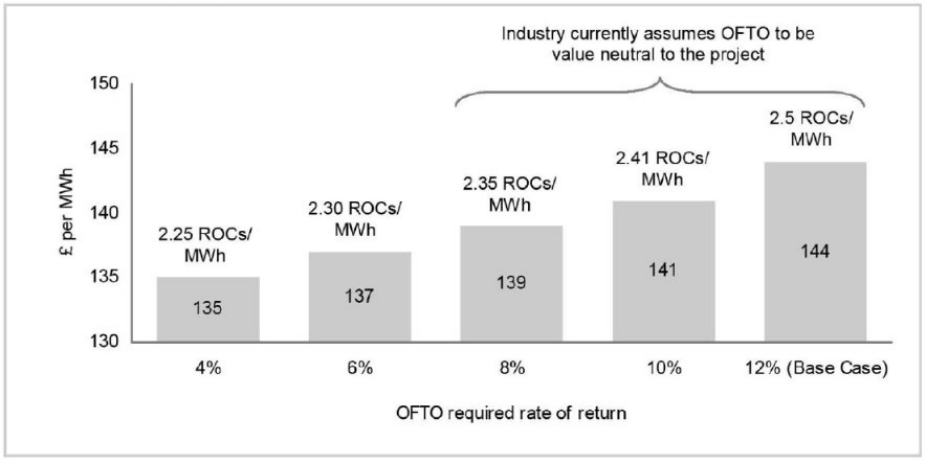


1. *At 12% post-tax nominal discount rate. Note that all modelling has been performed using post-tax real discount rates. Post-tax nominal rates are approximated by adding 2% to all post-tax real numbers.*

The Base Case scenario assumes net exports of 38%, reflecting the weighted average of projects at or near financial close in January 2009.

Figure 15: Levelised cost and RO banding required assuming different OFTO return requirements[1]

Source: Ernst & Young analysis



48. The conclusions of the EY Report were as follows:

> "The analysis indicates that offshore wind projects at or near financial close in January 2009 have considerably higher costs than in EY's analysis completed in April 2007 when the RO banding was introduced. Whilst a range of alternative means of providing support could be considered, if such support were to be provided through the existing mechanism of the RO, the level of financial support required to provide a reasonable economic return would be between 2.0 and 2.5 ROCs per MWh, based on the analysis performed. The current level of support to offshore wind is 1.5 ROCs per MWh.
>
> […]
>
> - Sensitivity analysis on some of the assumptions indicates that a re-banding of offshore wind would be highly sensitive to project-specific considerations and that a 2 ROC per MWh banding (rather than 2.5) might satisfy some investors on certain projects where:
>
> - The net output (load factor) is higher than the Base Case assumption of 38%
>
> - Assumptions are taken in regards to introducing the OFTO regime which gives a positive effect on project economics (assumed to be value-neutral at this stage in the Base Case analysis)
>
> - Capital and operating cost assumptions are lower than those assumed in the Base Case
>
> - More optimistic assumptions are taken for forward power, ROC or LEC prices
>
> - Lower hurdle rates (e.g. 10% post-tax nominal per the analysis) are assumed"

49. The wording in the first paragraph of the conclusions was suggested by Emma Cole of DECC in an email to EY on 16 April 2009:

> "Suggest you amend the first paragraph - it jumps too quickly to the 2.5 ROC answer. E.g. you could replace the second sentence with something along these lines "Our conclusion is that currently additional support is required to ensure an [appropriate?] level of revenue … A range of alternative means of providing support could be considered … if such support were to be provided through existing mechanism of the RO, 2-2.5 ROCs would be needed."

50. In a ministerial submission dated 17 April 2009, Kathryn Wood of DECC recommended the announcement of a review of banding on the basis of the results from the EY Report.

51. On 22 April 2009, the Government announced in the budget an early banding review for offshore wind, with the intention of increasing the banding of ROCs from 1.5 to 2 for projects meeting specified completion criteria if they placed new orders in 2009-2010 and then 1.75 in 2010-2011. In a ministerial

submission dated 1 May 2009, Mr Duggan updated the minister on reactions to the budget announcement:

> "6) We have received various reactions from the industry. The great majority of the reactions have been positive. Trade bodies such as the British Wind Energy Association and the Renewable Energy Association have welcomed the announcement. So too have the developers who would expect to benefit: Centrica, Masdar, E.ON and DONG. DONG have gone so far as to announce that they will press ahead with the development of their Walney offshore wind farm as a result.
>
> 7) However, there have been two responses in particular which have been critical of the move: Scira (who are developing the Sheringham Shoal wind farm and are owned by StatoilHydro and Statkraft) and SSE. Scira are disappointed that they are likely to miss out on any additional support because they signed a turbine order for Sheringham Shoal at the end of March to start construction next year. They claim that they are not making their hurdle rate on this project, and we will be meeting them to discuss their true costs. SSE are also concerned that they are likely to miss out with their Greater Gabbard project which signed turbine orders last summer, and will start construction next month. Interestingly however, when Chris Barton here spoke to RWE npower, who are co-developers of Greater Gabbard with SSE, they volunteered that they accepted the position and noted that the project was economic at 1.5 ROC/MWh, given the costs when contracts were signed last summer, but would not be economic at today's costs. Npower's reaction may be coloured by the possibility that their Gwynt y Mor project might benefit from any additional support (although they claim that they may need more than 2 ROC/MWh)."

52. By letter dated 1 May 2009, DECC wrote to developers, referring to the EY Report and explaining that "[g]iven that this report is based on evidence provided to us by developers and on [EY's] own information, we believe that this is a robust piece of work", but asking, as part of the review process, for any additional evidence on costs.

53. DECC also commissioned the Renewables Advisory Board ("**RAB**"), an independent non-departmental public body made up of renewable industry representatives to review and report on EY's analysis. In a presentation to RAB on 5 June 2009, DECC referred to the fact that from November 2008 they had been approached by a number of developers expressing concern about sharply rising costs of offshore wind. It summarised the conclusions of the EY Report, including the finding that levelised costs for indicative projects with a COD (Commercial Operation Date) in 2010-2012 were £144/MWh. The report produced by RAB (the **"RAB Report**") endorsed EY's base case model. RAB

concluded that although it had not been possible to audit the figures used in the EY Report, the analysis presented was broadly consistent with RAB's recent experience of costs and supported the current need for 2 ROCs/MWh. RAB noted that the future path of offshore wind costs was uncertain but it believed that offshore wind costs would fall and recommended a further review in late 2010.

54. The RAB Report was published alongside the Government's consultation on the financial incentives for renewable energy on 15 July 2009, which made clear that the decision whether to make a change to the bands for offshore wind would be based on the evidence in the EY Report, the RAB Report and the responses to the consultation and have regard to the matters set out in section 32D(4) of the Act.

55. The Q&A document prepared alongside the Government's consultation explained:

> "We consider 2 ROCs will be adequate for a majority of affected projects. It is not our policy to provide the exact level of support all projects need, as this would not incentivise developers to site and build economic projects."

56. The Government Response to the 2009 Consultation on the Renewables Obligation confirmed that it would raise the level of support to 2 ROCs/MWh for projects receiving accreditation between 1 April 2010 and 31 March 2014. The response recorded that the majority of respondents were in agreement with the outcomes from the EY Report and that 2 ROCs/MWh was "broadly the right level":

> "The principal aim of the offshore wind review was to ensure that projects received the necessary level of support to go forward, and maintain the necessary momentum for the offshore wind industry to ramp up deployment rates in line with our vision for 2020. It was not the aim to support any project at any price, and we were mindful of balancing the impact on consumer bills with a fair and consistent approach to maintain confidence in the industry."

57. It is to be inferred from the ministerial submission dated 11 March 2009 referred to at paragraphs 35 and 36 above, the ministerial submission dated 1 May 2009 referred to at paragraph 51 above and the explanations given to the Commission referred to below, that the factors underlying the Government's decision to

increase the banding for offshore wind to 2 ROCs, rather than to the 2.5 ROCs recommended by EY were that (i) it took a more optimistic view than EY as to future revenues from the sale of electricity; (ii) it considered that the new OFTO regime introduced by Ofgem would be revenue positive; (iii) developers had asked for an increase to 2 ROCs rather than 2.5 ROCs and the view was taken that this would be sufficient support to ensure that the offshore windfarms were economically viable; (iv) the need to minimise costs to consumers.

(5) Notification to the Commission

58. The Government first sent a draft state aid notification to the Commission on 8 October 2009. The notification presented the base case cost figure of £144/MWh and did not include any cost range:

2010

Total Production costs (£/MWh)	Total Revenues (£/MWh)
144 Source: Ernst & Young, 2009, *Costs of and financial for offshore wind.* Based on a megawatt-weighted average of projects near financial close in January 2009 Revenue assumptions also taken from Ernst & Young, 2009	*1.5 ROCs scenario:* Grey electricity price £54 (36-72) ROC value £68 (54-70) Of which buy-out price £50 Levy Exemption Certificates £4 Total £127 (94-146)
	2 ROCs scenario: Grey electricity price £54 (36-72) ROC value £91 (71-94) Of which buy-out price £66 Levy Exemption Certificates £4 Total £149 (112-170)
	1.75 ROCs scenario: Grey electricity price £54 (36-72) ROC value £80 (63-82) Of which buy-out price £58 Levy Exemption Certificates £4 Total £138 (103-158)

59. Following feedback that the Commission was concerned about overcompensation, a revised notification was then prepared in December 2009 with the same table as in the draft notification but with the addition of a cost range (in brackets):

2010

Total Production costs (£/MWh)
144 (128-160) Source: Ernst & Young, 2009, *Costs of and financial for offshore wind*. Based on a megawatt-weighted average of projects near financial close in January 2009 Revenue assumptions also taken from Ernst & Young, 2009

60. In the narrative following this table, the Government explained these figures:

> "The ranges for total revenue are based on both the ROC prices ranges and the wholesale power price ranges from Ernst & Young (2009). The main figure in each scenario (1.5 and 2 ROCs/MWh) represents our central estimate. Ernst & Young's central case found that 2.5 ROCs/MWh were required to meet a 12% required rate of return (their assessment of offshore wind developers' hurdle rate). However, this used a conservative assumption on load factors (the developers expect to achieve higher load factors than those assumed in the Ernst & Young report) and the effect of the new OFTO regime, both of which will bring down the level of ROCs required to meet that hurdle rate towards 2 ROCs/MWh, as illustrated in the report available at http://www.berr.gov.uk/files/file51142.pdf.
>
> 2 ROCs/MWh for projects reaching financial close in 2010 is estimated to give a total levelised revenue of £149/MWh (central estimate). This is marginally higher than the estimated £144/MWh levelised cost, but both numbers are subject to considerable uncertainty, with the range for levelised revenue running from £112 to £170/MWh. With 1.75 ROCs/MWh, the central estimate of levelised revenue falls to £127/MWh, which is unlikely to be enough for private sectors to invest to meet a central levelised cost estimate of £146/MWh."

61. Annex A to the state aid notification listed eight offshore windfarms which would benefit from the increased support of 2 ROCs/MWh and a further three that might do so.

62. Following the initial notification, in early 2010 the Commission raised a number of questions including a question, in the light of the difference between the recommendation in the EY Report of 2.5 ROCs/MWh and the UK authorities' retention of 2 ROCs/MWh, as to whether there were any assumptions about wind developers' costs that the government did not share with the EY Report.

63. In its answers, the Government explained that it had taken account of the beneficial effect of the new OFTO regime and the possibility of higher "load factors" (a measure of the proportion of time that windfarms were assumed to

be generating power) as well as direct evidence from offshore wind generators that 2 ROCs were needed for the projects under threat to succeed.

64. In answer to Question 7 about how the central estimates for costs and revenues had been chosen, the response was as follows:

> "The central estimates for levelised cost are taken from the base case in the Ernst & Young (2009) report. The central estimates for levelised revenue has been calculated by DECC using the base case assumptions from Ernst & Young (2009) report. They do not necessarily represent the most likely pinpoint values. Both the costs and revenues are subject to a large amount of uncertainty. This includes uncertainty over discount rates, capital costs, operational costs, load factors, the terms of power purchase agreements and wholesale power prices. A range therefore was presented for the revenue assumptions, representing low/high ROC and wholesale price assumptions in line with the assumptions in the Ernst & Young report. The intention was to provide a similar range for the levelised costs, but, apart from the cost of capital sensitivity, the report only details upside sensitivities reducing the levelised cost (OFTO and increased load factor), which would skew the range for comparability with the levelised costs, so only the base case levelised cost was presented. This may have unintentionally implied a higher degree confidence in the pinpoint central cost and revenue figures, than the UK Government has, because of all the uncertainties. The range of levelised costs associated discount rates from 10% to 14%, i.e. £128/MWh to £160/MWh, gives some idea of the uncertainty associated with different costs of capital for a technology subject to a risk premium."

65. That answer drew directly on the EY sensitivity analysis set out in paragraph 45 above: if an IRR of 10% was assumed, the LCOE would be £128/MWh, whereas if an IRR of 14% was assumed, the LCOE would be £160/MWh.

66. In answer to Question 11 as to why a 2 ROCs/MWh band for offshore wind, implying revenues of £149 and £145 per MWh for 2010 and 2015, would not result in overcompensation, given that the EY Report's conclusion was that the central value of levelised costs were £144 and £140 per year for those years, the Government's response was as follows:

> "As indicated above, the central revenue estimate is in the middle of a large range of uncertainty and the central cost estimate is also in the middle of a large range of uncertainty. Our calculations indicate that the base case levelised revenue with 2 ROCs/MWh is marginally above Ernst & Young's base case levelised cost, but that the central levelised revenue with 1.75 ROCs/MWh was some way below that levelised cost. Banding levels more precise than intervals of a quarter of a ROC/MWh might increase RO administration costs and increase complexity. The offshore wind under threat was considered to be crucial for the confidence of the offshore wind industry and the UK's ultimate achievement of its 2020 renewables target. 1.75 ROCs/MWh was not thought

> to be sufficient, based on the cost evidence [and representations from industry], to allow important offshore wind projects to proceed. Actual generation costs, and hence ROCs required to proceed, will vary significantly from project to project. 2 ROCs/MWh was felt to be the right level to allow the projects to proceed that are thought crucial to maintaining confidence in the UK's offshore wind sector and contribute significantly to the UK's 2020 renewables target. Banding levels for offshore wind projects commissioned after March 2014 will be considered in the next and subsequent general RO banding reviews."

67. In an email dated 11 February 2010 to the Government, Yann Germaine on behalf of the Commission commented on the Government's answers:

> "Rebecca,
>
> Here is the update: after looking at your replies, I am fine overall but still wondering about a way to properly justify the difference between levelised costs and revenues in 2010 (since the central estimate for revenues is higher than the central estimate for costs, hence overcompensation). Therefore we will probably advise you to strengthen as much as possible your explanations about uncertainties surrounding these calculations (which I understand).
>
> As for the procedural side, I tried to find a proper justification about why Simplified Procedure applies (apart from the fact it is an existing scheme). Maybe the best way forward in this respect is using Point 5(c) of the Simplified Procedure Notice. Can you tell me more about this and which justification applies?"

68. Following this email, in an amended answer to Question 8, the Government added the following:

> "In addition, it should be noted that as well as there being uncertainty surrounding the economics of any particular offshore wind farm, the costs and revenues per MW of capacity of MWh of generation will also vary considerably from site to site, and developer to developer. The banding level has been chosen to allow, at central assumptions/expected values, enough projects to proceed to maintain the necessary momentum for achieving the 2020 renewable energy target. These assumptions were based on the evidence in the Ernst and Young (2009) report and the claims of the offshore wind industry that, faced with large cost increases, 2 ROCs/MWh [not 2.5 as in the Ernst & Young base case] were needed. The banding level will not be sufficient to allow projects to proceed which turn out to be relatively very expensive, so limiting the costs to the consumer. It should also be noted that to get the central estimates of costs and revenues per MWh to exactly match would require setting the ROC banding to much more precise numbers than the current highest degree of 0.25 ROC/MWh intervals. Such precise numbers of ROC banding would a) indicate a overly high degree of confidence in the accuracy of the cost and revenue forecasts and b) imply additional administration costs."

69. The email from the Commission referred to at paragraph 67 above indicates that the Commission was understanding and accepting of the difficulties associated with the uncertainties surrounding the estimates of costs and revenues. It was

happy with the Government's overall conclusions and did not anticipate that there would be any incompatibility with the EC Treaty. As envisaged by this email, notification was given to the Commission under the simplified procedure for treatment of certain types of state aid on the basis that it was, in terms of the Notice from the Commission on a simplified procedure for treatment of certain types of state aid, a "prolongation and/or modification of an existing scheme" and a measure "corresponding to well-established Commission decision-making practice" and thus within the categories of notified aid which experience has shown are "normally approved without raising any doubts as to their compatibility with the common market". In our judgment, the correspondence with the Commission demonstrates that, whilst the Commission was scrutinising the proposal with appropriate rigour, it was looking for reasons to approve it rather than for a basis on which it might withhold approval. The Government certainly came to worry that it might not obtain clearance from the Commission by 31 March 2010, but we do not consider that the correspondence would have suggested that the Commission was minded to refuse approval altogether.

70. Clearance was given by the Commission in its letter dated 30 March 2010. In giving its approval, the Commission did not refer to the base cost estimate of £144/MWh but referred instead to the LCOE range of £128-£160/MWh. It reiterated its understanding of the difficulties in establishing precise forecasts of production costs and revenue streams to which it had referred in not objecting to ROO09 on state aid grounds (see paragraph 26 above). It was satisfied that the increased support to offshore wind would result in levelised costs matching the midpoint of the predicted revenues and would therefore prevent overcompensation in the aggregate of the different producers. Additionally, it was satisfied that the design of the scheme would prevent overcompensation since the banding levels were to be reviewed in 2014 and the value of the ROCs should fall as deployment increased.

(6) ROO10

71. ROO10 came into force on 1 April 2010 increasing the level of support to offshore wind from 1.5 ROCs/MWh to 2 ROCs/MWh. The explanatory

memorandum and accompanying impact assessment referred to the EY Report and the need to increase support for offshore generation because of the significant increase in costs.

(7) ROO13

72. The Renewables Obligation (Amendment) Order 2013 ("**ROO13**"), which was the first revision to the RO regime following ROO10, introduced banding at 0.1 ROCs/MWh increments for different generation types including inter alia offshore wind (1.9 ROCs/MWh), advanced gasification/pyrolysis (1.9 ROCs/MWh), dedicated energy crops (1.9 ROCs/MWh), geothermal (1.9 ROCs/MWh), ground-mounted solar photovoltaic (1.3 ROCs/MWh), hydroelectric power (0.7 ROCs/MWh) and onshore wind (0.9 ROCs/MWh).

C. THE FACTUAL WITNESSES

73. The one witness of fact, Mr McNeal, was called by London Array. Between 2000 and 2016, Mr McNeal worked as a civil servant. From September 2008 to April 2010, he was deputy director for low carbon business within the Department for Business, Innovation and Skills. In this role, he was responsible for establishing a new team entrusted with developing and publishing the UK's first low carbon industrial strategy. From April 2010 to October 2014, he was chief executive of the Office for Renewable Energy Deployment at DECC, responsible for delivering the UK's renewable programme, including offshore wind. His role involved working with a large team to advise ministers on all renewables development including the review and setting of the level of ROCs awarded to generators under the RO scheme.

74. Mr McNeal accepted that he was not involved in the banding decision that led to ROO10, nor was he called as an independent expert witness who could give opinion evidence. However, we do not accept the Class Representative's argument that Mr McNeal's evidence was "uninformative". He clearly had some knowledge, acquired after the decision on ROO10 was made, as to how the Government approached decisions on ROC banding. His knowledge about banding decisions generally is relevant and admissible although of course the

Tribunal must assess the extent to which that evidence says anything useful about the specific banding decision that led to ROO10 that was made before Mr McNeal joined DECC.

75. In his witness statement, Mr McNeal explained the operation of the RO scheme, describing the administration of the RO regime as highly complex and involving trade-offs between various policy objectives and stakeholder interests.

> "On the one hand, the regime seeks to maximise deployment of renewable energy by ensuring project developers are incentivised via an expected return on investment; on the other hand, it must minimise the effect of this on consumer bills so as to avoid netting off the benefits for the UK economy as a whole. What is more, as I have explained, it needs to achieve that balance through decision-making that relies on inherently uncertain data, whilst operating within the constraints of legislation and of set budgets."

76. Mr McNeal described the banding process as involving, first, the engaging of an external consultant to provide a technical report, which would be the starting point to formulate and submit initial views to ministers. The findings would then form the basis of a public consultation inviting input from developers, consumer groups, the supply chain and environmental groups. Project-related costs information was analysed in detail leading to the production of a macro-curve modelling the landscape for each technology. This was not precise or quantitative decision-making but involved a trade-off between the need to support more expensive projects by implementing a sufficiently high ROC banding level against the impact that supporting those additional projects would have on consumer electricity prices, whilst at the same time ensuring the growth and economic viability of the relevant supply chain. All of that also had to be done within, amongst other things, the boundaries of the legal obligation on the UK Government to source 15% of the UK's energy consumption from renewable sources by 2020 (as described above at paragraph 13) – which legally prevented his team from advising ministers to set the ROC banding level too low.

77. With regard to rounding, Mr McNeal's evidence was that there was a strong preference within DECC for the setting of the ROC banding level at round numbers (meaning no more than a single decimal point, e.g. both 2 and 1.9 were possible, but not 1.93). He did not recall ever advising, or considering advising,

ministers to set a non-round double-decimal ROC banding or an occasion when ministers had asked to go for numbers with two decimal places. Not only would a double-decimal number have not reflected the process of abstraction/modelling and balancing of trade-offs that he claimed he went through, it would also have created uncertainty and added bureaucratic complexity to the regime. The calculations underpinning the regime would be more complicated for everyone involved.

78. Mr McNeal was asked to assume the following scenario:

> "(1) the total cables costs for all relevant windfarms considered by DECC represented on average 14.5% of their total development costs, corresponding to ca. £1.5bn;
>
> (2) the cables costs considered by DECC reflected an overcharge of 26% across all relevant windfarms, caused by the Cartel; and
>
> (3) if the total cables costs were as per (a), then a 26% overcharge corresponded to ca. £390m, i.e. 3.7% of the relevant windfarms' total development costs."

79. Based on these assumptions, Mr McNeal was asked to provide his views on whether DECC's ROC banding decision would have been different if the total windfarm development costs considered by DECC had been 3.7% lower (i.e. what would have happened in a scenario with no 26% Overcharge for submarine cables). Mr McNeal's conclusions were, in summary, that:

(1) The 3.7% costs variation was very low in relative terms compared to the stakes DECC was looking at to decide on the ROC banding.

(2) In setting the ROC banding, DECC did not engage in any sort of scientific calculation that aimed to be accurately reflective of development costs.

(3) Any costs information put before DECC would not have been taken at face value but put in context also in light of predicted future market developments.

(4) For these reasons, it was highly unlikely that a 3.7% drop in windfarms' development costs would have led to a different decision with regard to

the ROC banding. A whole host of variables and adjustments had to be applied to, and considered alongside, the costs information. A change to the decision in response to the reduction in costs would imply a level of specificity that he never recognised in the operation of the RO regime.

80. Mr McNeal was asked in cross-examination whether the Government would analyse critically requests by developers for a certain number of ROCs and reach its own view as to what was required. His response was as follows:

> "Yes, within the context of the macro curve, absolutely, and to give an example from the period which we are discussing, my understanding, having now seen some of the documentation, is that Gwynt Y Mor at that time was asking in its meetings with officials for 2.5 ROCs. The Gwynt Y Mor got built at 2 ROCs, is my recollection, and I apologise if it was less than 2.0 ROCs, but the broad point is we -- you know, there were examples -- we were not -- we were alive to the possibility of gaming. That is the best way of putting it."[3]

81. When asked whether in 2013 there was a trading off between different technologies which made the final outcome less precise in respect of any specific technology, his evidence was as follows:

> "I would never use the word 'precise' about any outcome through the ROC process. There was -- there simply was not precision. It is not the right word to use. I take the broad point that you are making, but I -- you know, even with -- as the paragraph before, and as we have just been discussing makes clear, we are developing curves on the back of inherently uncertain data where, you know, things are -- there are so many moving parts, and they are so large, that it was not even possible just with offshore wind to have a single levelised cost for offshore wind at the end of our process. At the end of the process that happened in 2013, there was not one levelised cost for offshore wind, there were six."[4]

82. We recognise that some of the evidence that we have summarised, particularly as to the effect of a 3.7% drop in development costs, is opinion evidence. We also recognise that Mr McNeal necessarily derived his information about the Government's approach to banding decisions from a period after the ROO10 banding decision was made. However, we considered Mr McNeal to be a transparently truthful and reliable witness and we accept his factual evidence that we have summarised above. We saw no difference in circumstances that might explain why the Government's general approach to banding decisions in

[3] Day 2, 23:5 – 23:14.
[4] Day 2, 27:24 – 28:11.

the period after Mr McNeal joined DECC would have been significantly different from its approach in the run-up to ROO10.

83. On the basis of Mr McNeal's evidence, we conclude that the Government's approach to banding in the run-up to the ROO10 banding decision involved the obtaining of information from stakeholders including developers. The developers' requests were analysed critically with an awareness of possible gaming. Banding was a complex exercise involving multiple factors and policy considerations. Assumptions had to be made about a number of uncertainties, including the future progress of the developments, estimated costs and revenues. Banding was not a precise exercise. As Mr McNeal put it:

> "I remember the process as one with many moving variables and many levels of abstraction, especially once it got to macro-curve stage and we had to consider all technologies in the round – which meant it was simply not possible to pinpoint the ROC level in a way that accurately reflected all factors. As I like to put it, you simply could not land the ROC level on a pin."

D. THE EXPERT EVIDENCE

84. The Tribunal heard expert economic evidence from the following witnesses:

(1) Mr Richard Druce called by the Class Representative;

(2) Ms Sahar Shamsi called by London Array;

(3) Dr Serena Hesmondhalgh called by Nexans; and

(4) Dr Boaz Moselle called by the Prysmian Defendants (together, **"Prysmian"**).

85. Much of the debate between the experts involved interpretation of non-technical Government documents or speculation as to how the Government might have acted in the Counterfactual, which were matters for legal submissions rather than matters within the witnesses' specialist areas of expertise. In view of the nature of the issues raised in the expert reports, the Tribunal decided to rely entirely on traditional cross-examination rather than on concurrent examination

in the "hot tub". The Tribunal considers in retrospect that this was the correct decision.

86. On the central issue of quantifying the impact of a 26% Overcharge on EY's cost calculations, which was a true expert issue, there was by the time of the hearing convergence between experts that the "cost elevation", i.e. the impact on the costs of those windfarms relevant to the 2010 banding decision, was roughly £4/MWh in the Counterfactual. Ms Shamsi's figure was up to £4.5/MWh, Dr Moselle's figure was £4.2/MWh, Dr Hesmondhalgh's figure was at least £3.73/MWh and Mr Druce ultimately accepted a figure of £4.3/MWh. As Mr Lask KC on behalf of the Class Representative was content for the Tribunal to proceed on the basis that cost elevation was £4, we will do so.

87. Given that the cases advanced by each of the Aligned Parties in answer to the Questions were essentially the same, it was, in the Tribunal's view, unnecessary for three experts to be called by the Aligned Parties, all of whom gave clear and cogent evidence, rather than one jointly appointed expert.

88. In their closing written submissions, Prysmian were critical of Mr Druce's evidence, in particular on the grounds that he had advanced unsustainable views which he had subsequently abandoned. For example, in his fourth report, Mr Druce concluded that, in the absence of the Overcharge, the counterfactual LCOE would have been £137.6/MWh (which was relatively close to the Government's revenue estimate of £138/MWh in the state aid notification based on 1.75 ROCs as compared to £149/MWh which was the revenue estimate based on 2 ROCs).

89. This conclusion was, in the Tribunal's view, untenable. Mr Druce's cost elevation was based on his analysis of three windfarms whereas the EY's base cost was based on six. It was, as Mr Druce conceded in cross-examination, "very unlikely" that EY would have produced a counterfactual LCOE estimate of £137.6/MWh using a different number of windfarms.

90. The Class Representative defended Mr Druce on the basis that his analysis had evolved in the course of the proceedings in the light of disclosure and interaction

with other experts. The Tribunal considers, however, that while much of Mr Druce's expert analysis was put forward dispassionately to assist the Tribunal, in places his reports displayed some uncritical thinking, perhaps redolent of a wish not to "back down", rather than independent evidence. His calculation of the LCOE of £137.6/MWh in the Counterfactual was an example of this. While Mr Druce did acknowledge in the Joint Expert Statement that this calculation may not have involved a "like for like comparison", in our judgment he could usefully have acknowledged its fundamental flaws earlier and more expressly.

91. That observation aside, the Tribunal was satisfied that all experts were seeking to assist the Tribunal by providing independent expert opinion evidence.

E. THE ISSUES

92. The four ROC Issues (to which we refer as "**Question 1**" to "**Question 4**" respectively) are as follows:

(1) **Value of commerce**: In respect of ROO10, what is the appropriate value of commerce in respect of the benchmark windfarms relevant for the purposes of determining Question 2, both as a total amount and by reference to the relevant categories of costs?

(2) **Effect of 26% overcharge on number of ROCs/MWh**: Assuming that the benchmark windfarms relevant to the ROO10 were subject to an overcharge, resulting from the infringement as found by the Commission Decision, at the rate of 26%, would the number of ROCs/MWh awarded to offshore wind have been less in the Counterfactual?

(3) **Minimum cost elevation that would have reduced the number**: If the answer to Question 2 above is "yes", and in light of the value of commerce as found under Question 1 above, what is the minimum level of total elevated cost on the relevant benchmark windfarms that would on the balance of probabilities have resulted in fewer ROCs/MWh being awarded in the Counterfactual (the "**Minimum Cost Elevation**")?

(4) **Issue to be resolved so as to be binding in the London Array Proceedings only**: Based on the material before the Tribunal and the pleaded issues in those proceedings, was the Minimum Cost Elevation met or exceeded for ROO10 and, if so, with what effect on the number of ROCs/MWh awarded?

(1) Question 1

93. The main purpose of requiring the first of these issues to be determined by the Tribunal was so that, if Question 2 was answered in the affirmative, at the trial of the Spottiswoode proceedings, the Tribunal would be able to calculate the effect, if any, of any overcharge that was found to have been paid by purchasers of cables on the award of ROCs. The relevant value of commerce would be the proportion of the total costs of the benchmark windfarms attributable to the cable costs.[5] Question 1 was also relevant to answering Question 2 in so far as the value of commerce was an element in the calculation of the cost elevation resulting from a 26% overcharge.

94. Since the Tribunal has concluded that Question 2 is to be answered in the negative, it is unnecessary to answer Question 1. Nor has it been necessary to answer Question 1 in order to answer Question 2 in view of the convergence of the experts on the question of the cost elevation resulting from a 26% overcharge. Mr Lask KC, Counsel for the Class Representative, submitted that Question 1 no longer mattered. The Tribunal agrees and does not propose to address it further.

(2) Question 2

95. The Class Representative's damages claim in the Spottiswoode proceedings requires her to prove on the balance of probabilities that the Cartel caused an

[5] There was an issue between the experts (which it is not necessary to resolve) as to whether installation costs should be included in the calculation of the value of commerce for the purpose of determining the ROC Issues. The Class Representative's case was they should be included on the basis that the scope of the cartel extended to the installation works. Dr Hesmondhalgh disagreed on the basis that the cable installers were not identified in the Commission Decision as having participated in the Cartel. The other two experts were neutral on the point for the purpose of determining the ROC Issues.

overcharge in the prices of cables which was passed on to electricity suppliers and further passed on to the electricity bill payers whom she represents. A significant part of the losses claimed (c. £278.4 million out of £473 million total damages or 59% of the overall loss according to Mr Druce's original central case[6]) is alleged to have been passed on via an increase in the number of ROCs awarded to generators.[7]

96. Question 2 focuses on whether the Overcharge caused an increase in the number of ROCs awarded by asking whether, in the absence of the Overcharge, fewer ROCs would have been awarded to the benchmark windfarms under ROO10. 26% was the Class Representative's provisional high-case estimate of the Overcharge. A negative answer to Question 2 would mean that, even assuming that she establishes the high-case overcharge, she would be unable to establish that in the Counterfactual fewer ROCs/MWh would have been awarded to offshore wind under ROO10. It would follow that she would be unable to establish that loss was suffered by the class via the RO scheme under ROO10. An affirmative answer to Question 2 would require the Tribunal to proceed to answer Question 3 and determine the Minimum Cost Elevation.

97. The Class Representative's primary answer to Question 2 was, in summary, as follows:

(1) In the actual world, by allocating 2 ROCs to offshore wind for the purposes of ROO10, the Government had allowed a margin of £5/MWh between the estimated cost of an average windfarm (£144/MWh) and the revenue which 2 ROCs was expected to generate (£149/MWh). Put another way, using our terminology in paragraph 16, the £5 margin arose because 2 ROCs/MWh corresponded to a LCOE of £149/MWh whereas the LCOE that EY had estimated was only £144/MWh.

[6] See Table 2.2 in Mr Druce's First Expert Report
[7] It should be noted that this judgment does not address the Class Representative's case as to the effect of the Cartel on ROCs awarded to generators under ROO13.

(2) In the Counterfactual, without the 26% Overcharge, the cost estimate would have been lower by around £4/MWh while revenue would have been the same.

(3) This would have led the Government to award 1.9 ROCs/MWh as this banding would have provided much the same margin between costs and revenue as in the actual world, thereby ensuring that the level of support was equally sufficient. By contrast, a decision to award 2 ROCs/MWh would have provided a margin that was almost twice as large as in the actual thereby granting windfarms more support than they needed, imposing unnecessary costs on consumers and risking the refusal of State aid approval on the grounds of overcompensation.

98. The Class Representative's closing written submissions framed the central question for the Tribunal as being "whether the Government would have struck the same balance in the counterfactual, awarding 1.9 ROCs/MWh so as to provide the same margin as it did in the factual; or whether the lower costs would have caused it to alter that balance and provide a relatively more generous level of support to developers." Her answer to that central question was that the Government adopted a cost-based approach, closely examining the costs of offshore wind and seeking to align those costs with the revenue that could be expected from the banding levels under consideration and that to achieve its objective the Government would have fixed banding with a granularity of 0.1 rather than a granularity of 0.25 which was the granularity of banding under ROO09.

99. The Class Representative's alternative case, on which she placed little emphasis, was that, if the Tribunal concluded that the Government would only have awarded ROCs with a granularity of 0.25 ROCs/MWh, the Government would have awarded 1.75 ROCs in the Counterfactual. This was on the basis that a reduction of £1.0/MWh or more in the Government's cost estimate would have resulted in a LCOE of £143/MWh or less which would have been closer to £138/MWh than to £149/MWh. £138/MWh was the revenue which the

Government estimated would result from a banding of 1.75ROCs/MWh[8]. £149/MWh was the revenue which it estimated would result from a banding of 2 ROCs.

100. At the trial Ms Davies KC took the lead in making submissions on behalf of Prysmian which were adopted by the other Aligned Parties who all advanced essentially the same case. Counsel for the other Aligned Parties also made short supplementary submissions.

101. The Aligned Parties' case was, in summary, as follows.

(1) The Class Representative failed to discharge the burden of proving that in the Counterfactual, assuming a 26% overcharge on the price of cables purchased by the benchmark windfarms, the Government would have awarded fewer ROCs than the 2 ROCs which it actually awarded.

(2) There was no evidential basis for suggesting that in the Counterfactual the developers would have asked for fewer than 2 ROCs.

(3) In the Counterfactual, developers would have continued to ask for 2 ROCs for offshore wind, just as they did in the actual. EY would have concluded that the developers' requests were justified as it did in the actual world.

(4) The Government would have awarded 2 ROCs/MWh in line with the developers' requests as it did in the actual world. The band-setting exercise was not primarily concerned with margin or intended to ensure precise cost recovery. The quantitative impact of the Overcharge on the overall costs was too small to make a difference to the banding decision.

102. In constructing their rival versions of the Counterfactual, the parties focused on the inferences to be drawn, in particular from the banding exercise in 2009, the developers' requests, the EY Report and the Government's actual decision.

[8] See the notification to the Commission set out at paragraph 58 above.

(a) ROO09

103. It was common ground between the parties that part of the context for ROO10 was the predecessor Order, ROO09, which ROO10 amended. There was, however, disagreement as to the extent to which the Government's approach to banding for ROO09 was similar to its approach under ROO10.

104. It was submitted on behalf of the Class Representative as follows:

(1) Although it was an improvement on its technology-neutral predecessor in 2002, which had set a universal allocation of 1 ROC/MWh for all renewable technologies, ROO09 did not set a specific band for each technology and was only ever intended as a short-term stopgap to encourage newer and beneficial technologies to be developed. That meant that the Government followed a more broad brush approach in connection with ROO09 than it did with ROO10 that focused specifically on offshore wind.

(2) During the trial, Prysmian's Counsel handed up four tables which had been prepared by the Aligned Parties listing the renewable technologies that had a ROC banding under ROO09, setting out the Government's estimate of costs and revenues for each one and including a calculation of the absolute and relative margin. The Aligned Parties sought to rely on these tables as showing that the Commission was prepared to approve aid on the basis of a wide range of margins. The margins were, however, not shown to the Commission. Nor were the central estimates from which Prysmian calculated the margins. This is unsurprising. The focus of the Commission's assessment was on whether the Government's proposal that led to ROO09 would result in overcompensation in aggregate i.e. across different producers and technologies and over time.

(3) ROO10, in contrast to ROO09, was specifically concerned with offshore wind. It was to be expected that there would be narrower margins in 2010 than in 2009. The only objective of the 2010 review process was

to re-examine the costs of offshore wind and to set the subsidy at the appropriate level.

105. It was submitted on behalf of the Aligned Parties, in summary, as follows:

(1) The Class Representative's case that there was a change in the approach as between the 2009 and 2010 Order which led to more precision in 2010 was incorrect. The banding exercise in 2009 involved a thorough assessment of the levels of support required across a range of renewable technologies based on detailed cost data analysed by EY. The Government made clear in the response to the statutory consultation that it would be following the same approach on future reviews of banding. The statutory objectives were the same for ROO09 as for ROO10.

(2) The fact that different technologies were grouped together under ROO09 did not mean that the Government was any less concerned about possible overcompensation as the letter dated 11 February 2009 from the Commission, referred to paragraphs 26 to 28 above, made clear.

(3) The wide variance of the absolute and relative margins afforded to different technologies under the ROO09 Order and approved by the Commission demonstrated the authorities' awareness of the lack of certainty as to future costs and revenues. There was no close matching to central estimates. The Government was seeking to match the costs within the range for which they had evidence.[9]

106. We prefer the Aligned Parties' analysis. In the Tribunal's view, the evidence concerning the Government's approach to banding for ROO09 is useful background to the decision in ROO10. The Tribunal accepts the Aligned Parties' submission that the evidence shows that both the Government and the Commission were aiming to avoid overcompensation but were keenly aware of the uncertainties involved in cost and revenue predictions and the consequential difficulties in making fine distinctions between levels of support for different

[9] See paragraph 25 above.

technologies. These uncertainties meant that the Government could not quantify whether or not there was overcompensation simply by taking a "pinpoint" estimate of revenue or income. There were significant variations in the margins being afforded to different technologies and approved by the Commission, with ten technologies having a positive margin ranging in size from 6% to 35% and the remainder having negative margins. The Tribunal does not accept the Class Representative's submission that there was any material change of approach between the 2009 and 2010 Orders leading to more precision in 2010. The fact that different technologies were grouped together under the ROO09 banding did not mean that the Government was any less concerned about possible overcompensation.

(b) The developers' requests

107. The Class Representative and the Aligned Parties disagreed as to the significance of the developers' requests for the banding to be increased to 2 ROCs/MWh.

108. It was submitted on behalf of the Class Representative that the requests did not bear anything like the weight which the Aligned Parties sought to place on them, for the following reasons.

(1) Whilst it was accepted that the impetus for ROO10 was lobbying from certain windfarm developers, and that the requests were taken into account, it was not a foregone conclusion that the banding would change to 2 ROCs/MWh nor was a change to 2 ROCs/MWh the windfarms' only option for reform. The Government investigated for itself whether 2 ROCs could be justified and reached a decision based on the evidence. It would have done the same in the Counterfactual. The Government would not have commissioned EY to provide an in-depth expert study into the costs of offshore wind and the level of support required, and then asked RAB to critically assess EY's work if it had intended simply to rubber stamp the developers' requests.

(2) The Government applied a significant measure of scepticism in respect of what the developers were telling it, and was ready to refuse requests where it considered them to be excessive, as illustrated by the reaction to the request by Gwynt-y-Môr for 2.5 ROCs.[10] There was also pressure going the other way from certain developers including SSE who opposed any increase on the basis that it would distort the market. This was consistent with Mr McNeal's evidence that that Government was alive to the possibility of gaming and exaggeration by developers and that it could not and would not take the information provided by developers at face value:

> "As civil servants we could not simply take at face value the information that was provided by a developer. We had to critically analyse it and test it based on our knowledge of the market and the factors that could have influenced the accuracy of those costs / cost forecasts submitted for the project in question." [11]

(3) In the Counterfactual, the developers would have requested fewer ROCs. This was to be inferred from the fact that, in the actual, windfarm developers justified their request for 2 ROCs by reference to their costs. In the Counterfactual, the windfarms' cable costs would have been lower by 26%. Insofar as the windfarms were honestly and accurately reporting their needs to Government, they would therefore have requested a lower level of subsidy.

(4) The developers would have been realistic in their requests. They knew they were being scrutinised. The level of subsidy needed to meet their costs would have been substantially lower. 0.1 ROC was 20% of the increase that they were seeking in the factual.

(5) Whilst the Government had specifically asked EY to investigate the impact that an award of 2 ROCs would have, the Government was not prompting EY to find a case for 2 ROCs. EY's response to the Government's invitation to tender made clear that there were four key objectives for the EY Report, none of which referred to 2 ROCs. There

[10] See paragraph 80 above.
[11] First witness statement of Mr McNeal, paragraph 32.

were then seven key questions of which only the last referred to the impact of 2 ROCs.

109. It was submitted on behalf of the Aligned Parties as follows:

(1) The developers' requests for support are important in answering Question 2 because they are one of only two inputs into the Government's decision in 2010 (the other being the recommendations in the EY Report) that could have been different in the Counterfactual and so led to a different banding decision.

(2) There was no evidence that the windfarm developers' requests for support would have been any different in the Counterfactual. The Class Representative never pleaded the allegation that the windfarm developers would have sought an award of less than 2 ROCs and did not seek disclosure on this issue. In the circumstances, there was no basis for inferring that the developers would have only requested an increase to 1.9 ROCs/MWh.

(3) The individual windfarm developers had different cost profiles, as indicated by the analysis of Mr Druce and Dr Moselle shown below, that was driven in part by their distance from the shore (see paragraph 43 above). Their independent requests for 2 ROCs cannot have been driven by an exercise of specifically matching their own cost profile to a granular determination (to within, say, 0.1 of a ROC) of the level of ROC each required because, had they done so, they would have independently asked for different levels of support. Moreover, Mr Druce's calculations indicate that, in the Counterfactual, two of the windfarms (Walney 1 and Lincs) would have had higher costs than the costs London Array had in the actual which had led it to ask for 2 ROCs. Therefore, two important windfarms would have been able to justify a request for 2 ROCs in the Counterfactual.

	Mr Druce's calculations			My calculations		
Offshore wind farm	**Actual**	**Counterfactual**	**Cost Elevation**	**Actual**	**Counterfactual**	**Cost Elevation**
	[A]	[B]	C=[A]-[B]	[D]	[E]	F=[D]-[E]
London Array	201.4	194.5	6.9	184.1	178.1	5.9
Walney 1	226.3	220.8	5.5	186.7	182.3	4.4
Lincs	222.2	215.4	6.9	168.8	163.7	5.1
Average	**216.7**	**210.3**	**6.4**	**179.9**	**174.7**	**5.1**

Source: Appendix C ROO 2010 – Additional calculations: tab '1.1 Summary of LCOEs'. {ROC-D/10/1}

(4) There are a number of highly uncertain factors that feed into any assessment as to the level of future subsidy required, such that any assessment is itself highly uncertain. Whilst the developers would have made their own assumptions in respect of those complex and uncertain parameters, they were embarking on the same inherently uncertain exercise, that was incapable of one precise correct answer.

(5) Even if the figure of 1.9 ROCs/MWh had appeared in one of EY's sensitivities, or the greater margin between the central revenue estimate and EY's LCOE had led the Government to conclude that it should adopt more precise banding increments than 0.25 ROCs/MWh, such that the Government had been minded to raise the band to 1.9 rather than 2, the Government would have reverted to the developers to check the sufficiency of the proposal just as it did in the actual. The response of the developers would have been to reject that figure. They would have been able to rely on the EY Report indicating a base case level of required support of 2.4 ROCs/MWh. Moreover, the evidence establishes that all of the developers of the largest projects were seeking an IRR in excess of 10%; they would accordingly have refuted any sensitivity calculation based on a 10% assumed IRR. Given that the Government's overriding aim was to ensure that the subsidy would be sufficient to allow important offshore wind projects to proceed, the Government would not have insisted on adopting a new banding level of 1.9 ROCs/MWh, and would instead have increased the subsidy to 2 ROCs/MWh.

110. We prefer the submissions of the Aligned Parties on this issue. It is clear, in the Tribunal's judgment, that the developers' requests for an increase of banding to

2 ROCs/MWh were a key driver of the Government's subsequent decision making. It was common ground between the parties that the requests made by the developers for an increase in support to 2 ROCs were the trigger for the review of banding in 2010. The requests were highlighted as such in the ministerial submission dated 11 March 2009, the presentation to RAB on 5 June 2009 and the notification to the Commission dated 8 October 2009.[12] When commissioning the EY Report, the Government specifically sought an analysis of the impact that banding to 2 ROCs would have on internal rates of return, deployment rates and expected returns.[13] The fact that this was not the only objective of the EY report does not detract from its significance.

111. As set out later in this judgment, the EY Report looked at certain of the assumptions underpinning EY's base case in the light of the developers' request for 2 ROCs and analysed the sensitivities underlying its conclusion that 2 ROCs/MWh might be sufficient. The Government considered the developers' requests critically, as the Class Representative submitted, and at least one developer was opposed to the increase from 1.5 ROCs/MWh. The requests were not necessarily determinative of the Government's banding decision but they were nevertheless an important influence on it.

112. The Tribunal accepts the submission made on behalf of the Aligned Parties that, in order to succeed with its case on Question 2, the Class Representative must establish either that in the Counterfactual the developers would have requested a lower band than 2 ROCs, or that, if the developers had maintained a request for 2 ROCs, the Government would nevertheless have awarded a lower band level than requested. Both of these scenarios are, in the Tribunal's view, implausible.

113. As to the first scenario, the Tribunal considers that the Class Representative ought to have pleaded the allegation pursued at the hearing that, in the Counterfactual, the developers would have requested a lower band. The pleading of the allegation might have led to disclosure of documents from the

[12] See paragraphs 35, 53 and 58 above.
[13] See paragraph 33 above.

developers and/or witness evidence concerning the calculations on which they based their request for 2 ROCs. She relied instead solely on the inference that the windfarms would have made an honest and accurate assessment of their costs and, since their costs would have been lower in the Counterfactual, they would have made a lower request.

114. In the absence of evidence as to how the developers arrived at their requests for 2 ROCs in the actual, there is, in the Tribunal's view, no sound basis for the inference that, in the Counterfactual, their requests would have been any different. The requests for 2 ROCs were made against the backdrop of what had only just happened in relation to the ROO09 where the Government had settled on bands with minimum increments of 0.25 ROCs and a highest band for the least mature technology of 2 ROCs. Windfarm developers were facing significant increased costs. The natural response to those increased costs was to request "promotion" to the next band in ROO09 so that offshore wind benefitted from 2 ROCs per MWh. That request would have been just as natural in the Counterfactual.

115. We reject the Class Representative's submission that offshore wind developers would, in the Counterfactual, have submitted a "watered down" request for just 1.9 ROCs/MWh. In the actual, multiple developers independently sought an increase to 2 ROCs/MWh despite differences in their cost profiles. It was common ground between the experts that the cost elevation resulting from the Overcharge would have been no more than about 3% of the overall costs. That would simply not have been sufficient to cause offshore wind developers to request, in sufficient numbers, an increase to just 1.9 ROCs/MWh which was not even envisaged by ROO09. Recognising the uncertainty in both cost and revenue projections, offshore wind developers had ample justification to lobby the Government for an increase to 2 ROCs/MWh and we accept the Aligned Parties' submission that they would have done so in the Counterfactual.

116. As to the second scenario, we reject the Class Representative's argument that the Government would have awarded less than the 2 ROCs/MWh requested. The Government's core objective was to ensure sufficient windfarm projects proceeded. As we explain in more detail below when we consider the EY

Report, in the Counterfactual, EY would still have considered the developers' requests for 2 ROCs/MWh to be reasonable, even assuming that in the Counterfactual EY's base cost estimate was reduced by £4/MWh. Moreover, as we explain, the EY Report would, in the Counterfactual, have given little or no support for the idea that 1.9 ROCs/MWh would be sufficient. Furthermore, also as explained in the sections below, the Government would have had little interest in awarding ROCs in denominations as granular as 1.9 at the time of ROO10.

(c) The EY Report

117. In relation to the EY Report, it was submitted on behalf of the Class Representative as follows:

(1) Since EY's modelling of the required level of support depended on its cost estimates, the range of recommended support emerging from EY's analysis would in the Counterfactual have been lower: 1.9 to 2.4 ROCs/MWh rather than 2 to 2.5 ROCs/MWh.

(2) The suggestion made by Ms Shamsi in cross-examination that the EY sensitivities in Figure 11 of the EY Report were deliberately designed to produce results that aligned with the developers' request for 2 ROCs (so that if industry had still requested 2 ROCs in the Counterfactual, EY's sensitivities would have been adapted so that they still produced results that included 2 ROCs) was wrong for two reasons. First, EY's own description of Figure 11 (set out in paragraph 45 above) is that it "illustrates the sensitivity of levelised cost and RO banding levels to the assumed project discount rate". This indicated that the discount rate was driving the required level of support, not the other way around. Indeed, the range of 10% to 12% was consistent with the rates indicated by developers in their discussions with the Government. Second, if EY had been deliberately calibrating its sensitivities to align with the request for 2 ROCs/MWh, one would have expected all of its sensitivities to include 2 ROCs/MWh as one of the results. However, figures 14 and 15 do not.

Thus, these sensitivities do not "match" industry's requests as alleged by Ms Shamsi.

(3) In the Counterfactual, Figure 11 would have looked different. Dr Moselle and Ms Shamsi accepted that if EY were rounding to the nearest 0.1 then the level of banding required in the 10% rate of return column would be 1.9 rather than 2. Thus the headline cost figure on which the Government relied would have been £139.8/MWh at most; EY's base case cost estimate in the third bar would have been around £140/MWh and the required banding would have been 2.4.

(4) The Class Representative also sought to refute the Aligned Parties' submission that there was a significant degree of rounding in the EY Report. Contrary to the Aligned Party's case (see paragraph 118(2) below), no firm conclusions could be drawn from a comparison between EY's provisional analysis in the Annex and the final analysis in the EY Report. The Class Representative also drew attention to indications in the EY Report that, if there was rounding, it was rounding to the nearest 0.1 (including Figures 11 and 14).

(5) Even if, contrary to the Class Representative's case, the conclusions in the EY Report were unchanged in the Counterfactual, the Government would not have taken the EY Report at face value but would have done its own work to ensure it made the right trade-offs and protected consumer bills. The technical report would be used as the starting point to formulate and submit views to ministers, in accordance with Mr McNeal's evidence as to the operation of the RO scheme.

118. The Aligned Parties submitted as follows:

(1) In the Counterfactual, EY would have been asked the same questions, including specifically to consider whether the 2 ROCs sought by the developers was justified, EY would have adopted the same methodology and come up with the same recommendations.

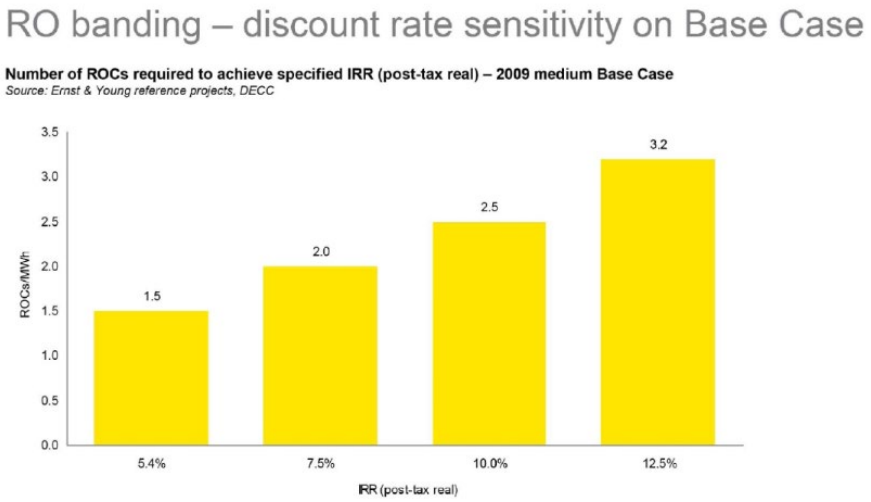
(2) It is likely that, in the Counterfactual, EY would have still presented a base case of 2.5 ROCs/MWh given EY's preference for round numbers and the rounding in the report. This is clear from the fact that EY's base case LCOE changed between drafts from £150/MWh on 19 February 2009 to £144/MWh in the final report, following the receipt of updated information from industry reducing the weighted capital expenditure but this did not change the banding level which remained at 2.5 ROCs.

(3) Even if, contrary to the Aligned Parties' primary case, EY had reduced its base case to 2.4 ROCs/MWh, that would have remained significantly greater than the 2 ROCs/MWh level of support sought by developers. Therefore, in those circumstances, EY would have reached the same conclusion in response to the same question, by reference to the same factors, that a request of 2 ROCs/MWh banding "might satisfy some investors on certain projects".

(4) Even if the 1.9 figure had appeared in Figures 11 or 13, it would have been (like the 2 ROCs) on the basis of an assumption of a hurdle rate of 10% which would have been too low for the windfarm developers.[14] The Commission would have considered that a higher rate of return than 10 per cent was acceptable, as it made clear in 2009 and 2010.

(5) EY's response to the invitation to tender[15] makes clear that EY were specifically asked to show what level of IRR would correspond to a 2 ROC banding level. This is what EY did in Figure 11 as shown by the earlier version of the sensitivity analysis which included a ROC banding of 2 with an IRR of 7.5%.

[14] See paragraph 108(5) above.
[15] See paragraph 33 above.



The 2 ROCs box on the left-hand side was driven by the requirement to have as an output a revenue assumption of 2 ROCs rather than being generated by an assumed IRR. It was therefore wrong for the Class Representative to suggest that Figure 11 would have shown a 1.9 figure in the Counterfactual.

(6) The fact that Figure 15[16] illustrating OFTO return requirements did not include a 2 ROC result was not material. In any event, as all the ROC figures in Figure 15 were higher than two, even with a LCOE as low as £139.8/MWh, that would not have shown a ROC banding level of less than two in the Counterfactual.

(7) Similarly the fact that Figure 14[17] showing the variation in levelised cost did not have a 2 ROC block, but rather the last two blocks have sensitivities that equate to 2.1 and 1.9 ROCs, did not assist the Class Representative's case since it was apparent from the description that EY considered the final two blocks allowed it to assess what level of net exports was implied by 2 ROCs/MWh. Moreover, the level of power export at 2 ROCs was not one of the specific outputs that EY had said in response to the invitation to tender its analysis would generate.

[16] See paragraph 47 above.
[17] See paragraph 47 above.

(8) For these reasons the Class Representative cannot establish that the EY Report would have presented any different analysis affecting its conclusions as to the level of support required for offshore wind.

119. The Tribunal prefers the Aligned Parties' analysis of the EY Report, save for the submission set out at paragraph 118(2) above concerning rounding. The EY Report set out conclusions on 2 ROCs because that is what industry was asking for and would still have been asking for in the Counterfactual. A clear focus of the report would therefore have been on 2 ROCs and the EY Report would not have suggested 1.9 ROCs. The Tribunal is prepared to accept that, in the Counterfactual, the LCOE calculated by EY would have been lower (at £139.8/MWh) and that, based on EY's view that a £3-4/MWh reduction in costs meant that 0.1 fewer ROCs were required, EY's calculation would have led to a recommendation of 2.4 ROCs in its base case. However, that would not have prompted the Government to reduce its support for offshore wind to 1.9 ROCs/MWh. The base case would still have remained significantly greater than the 2 ROCs/MWh level of support sought by developers. In those circumstances, the Tribunal considers that EY would have reached the same conclusion as in the actual that a request of 2 ROCs/MWh banding "might satisfy some investors on certain projects".

120. As to whether the reduction in costs would have affected EY's sensitivities in Figure 11, the Tribunal accepts the submission made on behalf of the Aligned Parties that in the Counterfactual, as in the actual, the cost of capital sensitivity in Figure 11 would have shown 2 ROCs in the second bar, not 1.9, because it was intended to reflect the 2 ROCs/MWh requested by the developers. That, moreover, would have been consistent with EY's general tendency to present increments of 0.25/0.5 ROCs/MWh. That was a general tendency, rather than an immutable convention. For example, there was a specific reason for the presentation of the more granular figure of 2.9 ROCs/MWh in Figure 11 which reflected the state aid acceptable limit of 14% IRR. However, even putting to one side the point that industry would, in the Counterfactual, still have been asking for 2 ROCs/MWh, there would be no good reason for EY to model sensitivities in Figure 11 by reference to 1.9 ROCs rather than 2 ROCs.

121. We do not accept the Class Representative's argument in paragraph 117(5). In the actual, the Government did perform a critical examination, both of the conclusions in the EY Report and the offshore wind industry's request for 2 ROCs/MWh. The Government was not equipped to gainsay the industry's information on costs, but it adopted a more optimistic position than EY on matters such as the benefits of the OFTO regime and it was for that reason that, despite EY's modelling suggesting that 2.5 ROCs would be needed given the industry's costs and the need for a 12% return, the Government decided that 2 ROCs would be sufficient. The Government would have adopted the same approach in the Counterfactual. Even if EY's recommendation had been for 2.4 ROCs/MWh, the Government would have concluded, as it did in the actual, that its more optimistic assumptions on matters such as the OFTO regime justified satisfying industry's requests for just 2 ROCs/MWh. That conclusion is fortified by our determination in the next section that the Government was not, at the time of ROO10 particularly interested in awarding ROCs in multiples of 0.1.

(d) The Government's decision

122. It was submitted on behalf of the Class Representative as follows:

(1) In reaching its banding decision, the Government focused on central values, comparing EY's base costs with its own central estimates of revenues. In the draft state aid notification of 8 October 2009, it did not include any cost range at all. It was only following feedback that the Government included cost ranges in brackets. Advice to ministers focused on EY's base case LCOE of £144/MWh rather than ranges. RAB also focused on EY's base costs LCOE. That was the only figure that it endorsed.

(2) In its state aid notification, the Government characterised central revenue at 2 ROCs/MWh (£149/MWh) as being only "marginally higher" than base case cost (£144/MWh). That this formed part of the Government's key reasoning for its banding decision is shown by the fact it was repeated in its answer to Question 11 of the Q&A with the Commission (see paragraph 66 above) when asked whether the margin

between revenues at 2 ROCs/MWh and central values for levelised costs would result in overcompensation:

> "Our calculations indicate that the base case levelised revenue with 2 ROCs/MWh [£149/MWh] is marginally above [EY's] base case levelised cost [£144/MWh], but that the central levelised revenue with 1.75 ROCs/MWh [£138/MWh] was some way below that levelised cost".

(3) This answer demonstrates that the Government's award of 2 ROCs/MWh involved a comparison of base case costs and the central revenue estimate. The Government deliberately allowed a margin between the two. The margin was intended to account for uncertainty in the estimates, and to ensure that crucial projects could proceed.

(4) The Government could have set banding at a much higher level to take into account uncertainty. However, in setting banding at 2 ROCs/MWh (the lowest level recommended by EY) and by preferring less conservative assumptions than EY, the evidence shows that the Government was anxious to avoid overcompensation of generators and keep costs for consumers as low as possible.

(5) Even a margin of £5/MWh (or 3.47%) posed difficulties for the Government. As the correspondence set out above demonstrates, this margin was subject to intense scrutiny by the Commission and there were doubts (both within the Commission and within Government) that the scheme would be cleared at all.

123. The Aligned Parties disputed the Class Representative's case that the banding decision was primarily based on a comparison of point estimates of revenues and costs, with a margin to account for uncertainty in the estimates. They submitted as follows:

(1) The fact that the first version of the state aid notification set out the base case cost figures and the revised version retained the central cost figures is explained in the answer to Question 7 in the Q&A document.[18] The

[18] See paragraph 64 above.

Government did not have from EY a comparable range of costs to the range it had for revenues because the EY Report had generally only detailed upside sensitivities for reducing the cost estimate so there would have been a skewed comparison. The Government also pointed out that the central estimates of levelised costs did not necessarily represent the most likely pinpoint values and that both costs and revenues were subject to a large amount of uncertainty. Unlike under ROO09, EY had not produced a low, medium or high case. It did not need to because its base case was above the level of support that developers had indicated to the Government they were seeking.

(2) Mr McNeal's evidence in cross-examination was that he would never use the word "precise" about any outcome through the ROC process.

(3) The sentence in the answer to Question 11 relied on by the Class Representative as showing the core reasoning for the banding decision must be read in context. It is only one part of the explanation provided to the Commission. The Government was not saying that overcompensation has been avoided because only the smallest possible margin has been allowed. They were explaining that an assessment of overcompensation based solely on looking at the margin between costs and revenues was inappropriate because the cost and revenue estimates were subject to considerable uncertainty. The £5/MWh margin was *not* presented as the solution to the problem of uncertainty in the estimates.

(4) The Government made clear that it had chosen a 0.25 banding increment because of the difficulty in setting more precise numbers.

(5) The Commission in its "State Aid Decision No. N 65/2010 – United Kingdom" placed no reliance on the base case cost estimate of £144/MWh but referred instead to the LCOE range of £128 - 160/MWh; and stated that it understood "the difficulties in establishing precise forecasts of production costs and revenues streams".

124. In the Tribunal's view, the state aid notification and the answers to the Commission's questions do not support the Class Representative's case that the Government's ROO10 decision was primarily governed by a comparison between point costs and revenues, providing for a margin to account for uncertainty. The explanation for the Government's inclusion of central estimates rather than ranges was the absence of the relevant data. The state aid notifications and the answers to the Commission's questions, read as a whole, indicate that the Government was approaching the banding decision as a multifactorial exercise, in accordance with the Act, reflecting not only the need to avoid overcompensation but also the need to ensure that sufficient offshore wind projects proceeded. As it had done in relation to the ROO09 banding exercise, the Government repeatedly stressed the uncertainties involved in estimating costs and revenues.

125. We reject the Class Representative's case that the Government allowed a £5 "buffer" to allow for uncertainty. Rather, viewed in context, both the Government and the Commission recognised that both the £144/MWh figure (representing an estimate of levelised cost) and the £149/MWh (representing an estimate of likely revenue if 2 ROCs/MWh hour were awarded to offshore wind) were uncertain figures that could fall anywhere in a wide range. The £5 difference between these figures was not a "buffer" to address uncertainty. Rather, the £5 difference was a consequence of the uncertainty that was implicit in the two figures themselves.

(e) Use of 0.1 increments

126. The Class Representative submitted that the Government was prepared to use increments of 0.1 of a ROC in banding decisions, both before and after the ROO10 decision. She submitted, in particular, as follows:

(1) When applying for State aid approval for the ROO09 decision in December 2008, it proposed that banding for co-firing should be reduced to 1/3 ROC/MWh (i.e. 0.333 ROC/MWh) in response to the Commission belief that co-firing was being over-subsidised.

(2) In the EY Report, EY presented numerous sensitivities in 0.1 ROC/MWh increments. This would have been unnecessary if the Government had a policy or aversion against banding at such increments.

(3) The ROO13 decision demonstrates that the Government was willing to set banding rounded to 0.1 ROC/MWh increments where justified on the evidence.

(4) Mr McNeal's unchallenged evidence was that the Government's preference was to round to a single decimal point, with both 1.9 and 2.0 ROC being possible, but not 1.93.

> "…there was a strong preference within DECC for the setting of the ROC banding level at round numbers (meaning no more than a single decimal point, e.g. both 2 and 1.9 were possible, but not 1.93) and I do not recall ever advising, or considering advising, ministers to set a non-round double-decimal ROC banding".[19]

(5) The Government's assertion in the first state aid notification that "[b]anding levels more precise than intervals of a quarter of a ROC/MWh might increase RO administration costs and increase complexity" and in the amendment to the notification dated 12 February 2010 that:

> "…to get the central estimates of costs and revenues per MWh to exactly match would require setting the ROC banding to much more precise numbers than the current highest degree of 0.25 ROCs/MWh intervals. Such precise numbers of ROC banding would a) indicate a overly high degree of confidence in the accuracy of the cost and revenue forecasts and b) imply additional administration costs"

should be seen in their proper context. The Government was seeking to justify to the Commission a decision that had already been taken domestically. There is no reason why a banding regime providing support in increments of 0.1 ROC/MWh should be more complex or difficult to administer. The Government's initial explanation that precise intervals "might" increase

[19] First witness statement of Mr McNeal, at paragraph 35.

administrative costs and complexity is vague and tentative. The second explanation appears to be referring to precise rounding to two decimal places.

127. The Aligned Parties submitted that the Government would not have moved to a banding increment of 0.1 ROCs/MWh in the Counterfactual, on the following grounds:

(1) It is clear from the Government's answers to the Commission's questions that it was concerned that moving to banding levels more precise than 0.25 ROCs/MWh might increase administration costs and complexity and indicate an overly high degree of confidence in the accuracy of the forecasts.

(2) There is no basis for doubting that these concerns were genuine. At the time of submitting the answers to the Commission, the UK was a Member State of the European Union with duties of sincere co-operation so it had to be frank and honest in its dealings with the Commission and moreover could expect that anything it said to the Commission in this context could lead to further questions.

(3) There was no clear explanation for what the Government meant by increased administration costs and complexity but similar objections to banding with small increments were raised in the context of ROO09. The explanation may be that the more granular the banding increment, the greater the risk of a subsequent change of costs being sufficiently large to trigger a banding review.

(4) With regard to the banding increments in 2013, the evidence of Dr Hesmondhalgh was that industry learning had resulted in a reduction in costs since the time of the 2010 banding decision which could only be recognised by introducing new, narrower increments. This change in perception had not occurred in 2010.

(5) Mr McNeal's evidence was that a 3% difference in overall windfarm costs would have made no difference to the Government's banding

decision because the Government's banding decisions were subject to much larger uncertainties.

128. We accept the Aligned Parties' case that the Government was genuinely reluctant to move to a banding increment of 0.1 ROCs/MWh for the reasons it gave (unwillingness to create a spurious impression of accuracy, additional administration costs and complexity). There is nothing obviously questionable about the assertion that more granular banding would create more administration costs and complexity. At the most basic level, there would be more bands to administer and both Government and industry participators would need to put in place systems to perform calculations differently if more bands with greater granularity were introduced. We agree with the Aligned Parties that the Government would not have exaggerated these administrative issues given its duty to deal fairly and transparently with the Commission. Moreover, the more bands that were introduced, the greater the risk of lobbying by particular industries for "promotion" to a nearby band following a modest increase in costs. There were objectively good reasons for the Government to be concerned about issues such as these.

129. Mr McNeal's evidence suggests that the Government would have been prepared to award ROCs in increments of 0.1 in an appropriate case. Moreover, the Government's early thinking on ROO10 included a proposal that the level of support for offshore wind projects would step down to 1.75 ROCs/MWh for projects that were accredited between 1 April 2014 and 31 March 2015. The concept of a banding of 0.1 of a ROC was not, therefore, philosophically "off-limits" although the prospect of higher administrative costs meant that the Government had an instinctive reluctance to set the band at such a granular level. However, there would have been no compelling reasons for the Government to do so in the Counterfactual and award the developers a lower banding than they were seeking. We have concluded that, in the Counterfactual, EY would have confirmed the reasonableness of the developers' request for 2 ROCs/MWh. In those circumstances, the Government would not have concluded that there was a sufficiently good reason to overcome its instinctive reluctance at the time to issue ROCs in increments of 0.1 and to issue 1.9 ROCs/MWh to offshore wind projects.

(f) The Counterfactual

130. The Class Representative's primary case as to what would have happened in the Counterfactual was, in summary, as follows:

(1) As was common ground, EY's LCOE base cost estimate would have been lower by about £4.2/MWh compared to its base case LCOE estimate of £144/MWh in the actual. Therefore, in the Counterfactual, EY's calculation of LCOE would have been £139.8/MWh.

(2) It is also common ground that the revenue estimates relied on by the Government would have been the same in the Counterfactual. Thus, the Government would have estimated that 2 ROCs/MWh would generate total revenue of £149/MWh, whilst 1.75 ROCs/MWh would generate £138/MWh.

(3) In circumstances where the developers' requests were grounded in the cost evidence, and where the level of subsidy required to meet those costs would have been at least 0.1 ROCs/MWh fewer in the Counterfactual, it is more likely than not that they would have requested fewer ROCs in the Counterfactual.

(4) An award of 1.9 ROCs/MWh would have enabled the Government to strike the same balance between its different objectives as it did in the actual. In the actual, the Government judged that an award of 2 ROCs/MWh, and the £5/MWh margin that it provided, was the right level to ensure that key windfarm projects went ahead, whilst avoiding overcompensation under the state aid rules and minimising costs to consumers. In the Counterfactual, the Government could have provided the same margin (3.47%) by awarding 1.9 ROCs/MWh.

(5) The Government would have had powerful incentives to set support no higher than 1.9 ROCs/MWh. Whereas in the actual the Government justified its decision on the basis that revenue at 2 ROCs/MWh was only "marginally above" cost, that would no longer have been the case in the

Counterfactual. Cost (£139.8/MWh) would in fact have been very close to revenue at 1.75 ROCs/MWh (£138/MWh) and a considerable distance away from revenue at 2 ROCs/MWh (£149/MWh). Thus, an award of 1.9 ROCs/MWh would have been capable of justification before the Commission. An award of 2 ROCs/MWh would have been indefensible.

131. The Class Representative's alternative case, on which she placed little emphasis, was that, if the Tribunal concluded that the Government would only have awarded ROCs with increments of 0.25 ROCs/MWh, the Government would have awarded 1.75 ROCs in the Counterfactual because of the similarity between the costs of circa £140/MWh and revenues of £138/MWh.

132. In the Tribunal's judgment, the Government would not have reached a different banding decision. The Tribunal's conclusions as to what would have happened in the Counterfactual are as follows:

(1) The developers would have maintained their requests for 2 ROCs/MWh, for the reasons set out at paragraph 114 above.

(2) The EY Report would have presented a base case of 2.4 ROCs/MWh. In these circumstances, the Government would still have approved the developers' requests for 2 ROCs/MWh, as explained at paragraph 119 above.

(3) The Government would have awarded 2 ROCs/MWh to offshore wind on the basis that that is what the windfarm developers would have sought and EY would have found to be justified. It would not have focused on a particular margin between point estimates of costs and revenue, as set out at paragraph 124 above.

(4) The Government would not have moved to a banding increment of 0.1 ROCs/MWh.

(5) The Government would not, therefore, have awarded 1.9 ROCs/MWh to offshore wind projects in the Counterfactual.

133. The Class Representative's alternative case is unrealistic and contradicted by her own expert. The very reason the Government embarked on the 2010 rebanding exercise was because the offshore wind industry was facing a significant increase in its capital costs. Capital costs had doubled since 2006/7 with this reflected in an increase in the LCOE from £91/MWh in 2006/7 to £144/MWh in 2010. On the Class Representative's own case, EY's estimate of the LCOE in the Counterfactual would have been £140/MWh and the industry would still be facing a significant increase in costs even ignoring the effect of the Cartel. Providing support to the offshore wind industry at just 1.75 ROCs/MWh simply would not have provided sufficient certainty that significant participants in the industry could recover their costs and make a reasonable commercial return. The whole point of the banding review was to ensure that the offshore wind industry generally remained viable. We are unable to accept the Class Representative's alternative case that the Government would have set support at 1.75 ROCs/MWh in the Counterfactual.

134. While the matter is of course for determination by the Tribunal, and not susceptible to purely expert opinion, it is not insignificant that Mr Druce himself accepted in cross-examination that, in his opinion, the Government would not have awarded just 1.75 ROCs/MWh.

135. In short, the answer to Question 2 is "no". Assuming that the benchmark windfarms relevant to the ROO10 were subject to the Overcharge, the number of ROCs/MWh awarded to offshore wind would not have been less in the Counterfactual.

(3) Questions 3 and 4

136. Given the Tribunal's conclusion on Question 2, Questions 3 and 4 do not need to be answered.

F. DISPOSITION

137. The Tribunal finds that, assuming that the benchmark windfarms relevant to ROO10 were subject to an overcharge resulting from the infringement as found by the Commission Decision, at the rate of 26%, the number of ROCs/MWh awarded to offshore windfarms under ROO10 would not have been less in the Counterfactual.

138. This judgment is unanimous.

The Hon. Mr Justice Richards Chair	Andrew Lenon KC	Professor Anthony Neuberger

Charles Dhanowa, CBE, KC (Hon)
Registrar

Date: 30 October 2025