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13 December 2015

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Our ref: LEG/PS/SG

Dear Professor Glasson,

Deadline 8 submission – response to Rule 17 Letter dated 4 December 2015 and to the Applicant's Deadline 7 submissions

Further to my letter and submissions of 10 December, I enclose the comments of E.ON E&P UK Limited ('E.ON'), on behalf of itself and its licence partner Bayerngas, in response to the submissions of the Applicant at Deadline 7 and the Rule 17 Letter dated 4 December 2015, in which the Examining Authority required that all interested parties make final submissions by midnight on Sunday 13 December 2015.

Should you require anything further, please do not hesitate to contact me.

Yours sincerely


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DEADLINE 8 SUBMISSION of E.ON E&P UK Ltd

13 December 2015

Hornsea Offshore Wind Farm Phase 2 DCO



Introduction

As the submissions of the Applicant and E.ON E&P UK Ltd ('E.ON') at Deadline 7 made clear, discussions as to a commercial agreement between the parties are continuing, with the aim of finalising them prior to the end of the Examination.

However, it is not yet certain that an agreement will be reached, and as such E.ON presents this submission in response to certain points made by the Applicant in their Deadline 7 submissions, in compliance with the Examining Authority's requirement for all interested parties' final submissions to be submitted to it by midnight on Sunday 13 December.

This submission takes the form of:

- Part 1: a response to the Applicant's submissions in relation to question 7 of the Examining Authority's Rule 17 request of 26 November 2015 (contained within the Applicant's main Deadline 7 response).
- Part 2: a response to the Applicant's submissions in relation to question 8 of the same Rule 17 request (contained within Appendix S of the Applicant's Deadline 7 submissions).
- Part 3: comments on the Applicant's response to E.ON's deadline 6 submissions (contained within Appendix P of the Applicant's Deadline R7 submissions).
- At Part 4, E.ON includes some further detail on the effect that the provision of compensation to the Applicant would have to the viability of its development of Block 48/3, and the suitability of the protective provisions it has suggested.

E.ON notes that the protective provisions that are included in the DCO submitted at Appendix A of the Applicant's Deadline 7 submissions are the same as those commented upon in section 4 of E.ON's Deadline 7 submissions, and so those comments are not repeated here.

If an agreement cannot be reached, E.ON continues to submit that its proposed protective provisions represent the pragmatic and lawful solution to the requirement to balance the currently conflicting interests of the Applicant and E.ON. For all of the reasons above and in E.ON's submissions, the Examining Authority should recommend the making of, and the Secretary of State should ultimately make, the Order in the form sought by E.ON.



Part 1: A response to the Applicant's submission in relation to Question 7 of the Examining Authority's Rule 17 Request

Para No.	Applicant's Response to Deadline 7	E.ON's response
9 - 11	<p>The Applicant sets out that E.ON will be required to obtain additional consents under the Offshore Petroleum Production and Pipelines (Assessment of Environmental Effects) Regulations 1999 and the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001, and quotes DECC guidance to applicants for oil and gas licences that</p> <p><i>“A Production Licence does not grant carte blanche to carry out all petroleum related activities from then on. Some activities, such as drilling, are subject to further individual controls by DECC, and a licensee of course remains subject to controls by other bodies such as the Health and Safety Executive.”</i></p>	<p>E.ON responds in detail to these points at sections 7.4 and 7.5 of its Deadline 7 submission, but can confirm in this submission that its position is as follows:</p> <p>It is correct that E.ON is required to obtain further consents under its Licence, and E.ON does not submit that it has carte blanche to carry out all petroleum related activities, nor that it has not been aware of the necessity of obtaining these additional consents. However, as it has been granted the licence, the <u>principle</u> of its ability to undertake petroleum activities has been established, it is only the details of how they are carried out that requires additional consents, in a similar to way to outline and reserved matters applications under the Town and Country Planning Act 1990 regime, or indeed a DCO providing for the detail to be discharged through requirements or DML conditions.</p> <p>In contrast, the Applicant has not yet received in principle permission for its activities in the overlap zone. The Applicant's position suggests that their option for a lease and DCO application are of greater status than E.ON's existing licence, when, as set about above, this is clearly not the case. Both parties' submissions on the NPS and marine policies should therefore be read on this basis.</p>

		<p>Furthermore, paragraph 3 (4) of E.ON's protective provisions sets out that the controls on the Project's operations only apply to the extent that the licence applies to the suggested 'green' area. Clearly, if any consents under the Licence were not forthcoming from DECC, E.ON is already incentivised to relinquish these areas under the Licence regime, thereby avoiding paying ongoing annual licence fees on them and releasing them back to the Project.</p> <p>It is worth noting that the same principle of relinquishment would apply in respect of the additional 1nm included in E.ON's protective provisions plan submitted at Deadline 7 and explained at paragraphs 4.9 to 4.15 of that submission. Once that area was no longer required for access to wells – expected to be appraisal wells in the easternmost extremes of the prospects in the early stages of development - it is likely that that area would be relinquished under the licence.</p>
<p>13</p>	<p>For example, the DECC guidance on the oil and gas consenting regimes referred to in the paragraphs above (DECC Other Regulatory Guidance, Feb 2014) recognises the part which oil and gas developers must play in developing their plans and achieving viable coexistence. The Applicant recognises that E.ON E&P are at an early stage in this process but that makes it all the more important that the checks and balances under its own consenting process remain intact. This is the only way to ensure that any restriction on offshore wind operations are objectively justified if and when proposals are developed and sufficient information from the oil and</p>	<p>E.ON dealt with the quoted guidance at paragraphs 7.4.6 and 7.4.7 of its Deadline 7 submission.</p> <p>The crux of the guidance quoted (when taken into account alongside the NPS and marine plan policies) is that wind farm developers and oil and gas interests should talk to each other at an early stage to reach a reasonable commercial solution. It is clear from E.ON's submissions to the Examination that these discussions did occur at an early stage, where E.ON made clear to the Applicant its interests and expectations for Block 48/3.</p>

	gas developer therefore becomes available.	Despite this, as set out in E.ON's earlier submissions, the Applicant did not adequately consider E.ON's interests within its Environmental Statement, and has instead sought, at all times, to rely on the oil and gas clause as the only mechanism for resolution of the conflict of interests.
14 (i)	E.ON E&P stated at paragraph 1.57 of its Deadline V submission that the coloured area represents 20% of the overlapping area of interests including two 500m pipeline exclusion zones. The Applicant notes however that the coloured area does not include the eastern pipeline exclusion zone. If the eastern exclusion zone and the coloured area are considered together, combined they represent closer to 26% of the overlapping area of interests. When combined with the area of E.ON's E&P licence block outwith the overlapping interests, this constitutes approximately 42% of the total area of Block 48/3	<p>E.ON has updated its position following discussion with the Applicant in relation to the protected area, and E.ON's position is now as set out in E.ON's deadline 7 submission.</p> <p>An errata sheet to E.ON's deadline 7 submission is included at Appendix 1 to correct percentage figures which required updating following the addition of the further 1nm area to protect helicopter access.</p> <p>The coloured area includes two 500m pipeline exclusion zones, which prohibits any turbine foundations from being installed, as well as E.ON drilling activities. Neither party is able to carry out construction works in this area, so the impact on the construction of the wind farm of it being included in the green area suggested by E.ON is neutral.</p>
14 (i)	The Applicant notes that a minimum relinquishment of acreage at the end of the initial term (4 years) is a condition of most licences and that this is typically 50% of their licensed area. On this basis, and contrary to the submissions which E.ON E&P have made, the solutions proposed by E.ON E&P do not represent a significant compromise on their part.	E.ON does not accept that there is no concession on E.ON's part. The construction programme in the Applicant's DCO would stop E.ON from carrying out seismic survey over the remainder of the block, and would stop E.ON from exploring, and appraising future development prospects on the rest of the block within the overlap area, before any obligation to surrender crystallised (and therefore ultimately also stop the

		<p>development by E.ON of producing assets in that area).</p> <p>As a result of the timing of the Applicant's construction programme, E.ON will lose the opportunity to carry out those activities (which it is paying annual licence fees for) prior to the relinquishment obligation under the licence being triggered.</p>
14 (i)	<p>The Applicant has made detailed submissions previously on the speculative nature of potential development in the wider Block 48/3 and the weight which should be applied on that basis.</p>	<p>E.ON has responded previously about the nature of oil and gas exploration licences. In making the policies which apply to the determination of the DCO in NPS-EN3, Government is aware of the inherent uncertainty in oil and gas exploration but has chosen to protect it and give "substantial weight" to adverse impacts on licensed oil and gas activities in the determination of DCOs.</p>
14 (i)	<p>It is also important to remember that E.ON E&P are not proposing that the oil and gas clause mechanism to determine part of the Applicant's lease arrangements be restricted or disapplied – just that the Applicant's right to seek compensation be restricted if the oil and gas clause mechanism is triggered. E.ON E&P are therefore not conceding the ability to develop any part of the overlap area – they are, however, attempting to utilise the DCO process to restrict the operation of other policy and consenting regimes as they may apply to them.</p>	<p>E.ON has set out its position in relation to the oil and gas clause in its Deadline 5, 6 and 7 submissions. E.ON has also explained that the compensation consequences of requesting the exercise of the oil and gas clause would render the continuing exploration and appraisal of the remaining overlap area as effectively having been given up to the Applicant.</p> <p>As stated in E.ON's deadline 7 submission, the protective provisions sought by E.ON do not attempt to change any of the policy and consenting regimes which will apply to E.ON in future. Compensation is appropriately excluded. The oil and gas mechanism is intended as a mechanism of last resort. The DCO process and the protective provisions means that it will not have to apply as a last resort, as both parties interests can be accommodated without the need to seek termination.</p>



		There is no interference with the Applicant’s obligations under the AfL – there is simply clarity at this stage that the oil and gas mechanism is unlikely to be required as a last resort.
14(ii)	The oil and gas DECC guidance quoted above characterises as “ <i>very unlikely</i> ” the prospect that it would prove impossible to access an oil or gas find without an adjustment to an existing or proposed wind farm. Directional drilling is considered by the Applicant to be technically feasible and a way of minimising interactions.	E.ON’s Deadline 5 (paragraphs 1.59, 3.6, and Appendix 6 row 23) and Deadline 7 (paragraphs 2.4 and 2.5) submissions explain why directional drilling is not considered feasible within the geology of Block 48/3. The Applicant has not addressed these comments.
14(iii)	The removal of the 5MW wind turbine option from the Project’s design envelope does not reduce the area required for the wind farm itself and therefore no reduction to the generation asset boundary is justified on the basis of the removal of a turbine category option or reduced maximum turbine numbers. If a larger wind turbine is selected, the spacing between the turbines would normally be increased commensurately to ensure the Project operates productively and efficiently. Any reduction in the area removes flexibility for layouts which is required to avoid construction and operational constraints and to achieve an optimal energy yield. Any restriction on flexibility could therefore impact on cost and yield.	E.ON notes that the Applicant has accepted the area over which E.ON has sought protective provisions. This does not equate to a change to the wind farm boundary in the application, but in practical terms indicates an acceptance that the protection of E.ON’s assets may justify a temporary reduction in the area available for the applicant to develop. While E.ON acknowledges that full flexibility would be the ideal, it is entirely feasible that the spacing and layout of a wind farm consisting of 5MW WTGs is comparable to one consisting of 6MW WTGs. In any event, to the extent that some flexibility is lost, resulting in cost and yield being affected, that is part of the pragmatic compromise of interests required by the NPS, and reflect the substantial area effectively lost by E.ON. The same applies in respect of reduction of turbines from the updated calculations of turbines potentially affected by the protective provisions area proposed by E.ON (see paragraph 6.1 of Part 4 of this submission). It should also be noted that it is still feasible that the maximum capacity targeted by the Project could still be reached within



		the available area by the use of larger turbines or alternate layouts.
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Part 2: A response to the Applicant's submission in relation to Question 8 of the Examining Authority's Rule 17 Request

E.ON has reviewed the Applicant's Appendix S, responding to ExA's question 8 on the application of the relevant marine plans to the application. E.ON's response was submitted at Deadline 7. E.ON notes the following points in respect of the Applicant's submission:

The Applicant's commentary on WIND1

In relation to paragraphs 6-10 (the Applicant's commentary on policy WIND1), E.ON does not agree that this policy is to be applied in determining the Hornsea 2 application. The policy begins with the words "*Developments requiring authorisation, that are in or could affect sites held under a lease or an agreement for lease that has been granted by The Crown Estate for development of an Offshore Wind Farm, should not be authorised unless...*" The supporting text at paragraph 306 emphasises this: "*the policy seeks to prevent other new development or activities that would compromise construction, operation or decommissioning of the Offshore Wind Farm*". This policy is of background relevance for its support of offshore wind, but is not instructive as to how the conflict between E.ON's interests and the Applicant's interests should be determined by the Secretary of State. The current application is not for authorisation of E.ON's activities, for which it already has the licence. More specific policies (WIND2 and OG2, with GOV2 and GOV3 on coexistence) should take precedence. WIND 2 is most relevant to the current application.

The Applicant's commentary on WIND2

E.ON acknowledges that there is policy support for offshore wind, and E.ON's practical proposals for coexistence recognise this.

The Applicant has not drawn attention to the explanatory text on WIND2, which makes clear that the policy support is caveated with the need for applicants to "*demonstrate how other activities and the environment have been taken account of in proposals as well as taking into account GOV2*" (paragraph 311), and that applications will be looked on favourably "*where conditions are met*" (paragraph 312).

The Applicant has also not given a full narrative on WIND2. Specifically, the Applicant's commentary neglects to mention the crucial explanatory text to WIND2 which provides a clear priority between oil and gas and wind interests in the event of conflict: "*Other policies should be taken into account when applying the support outlined in WIND2. This includes where OG2 is applicable which would take precedence over WIND2.*" (paragraph 313).

The Applicant's commentary on OG2

OG2 is clear and unequivocal in support for oil and gas development. Paragraph 313 (in the commentary on WIND2) makes clear the extent of this



support: it is strong enough to take precedence over the support for offshore wind development in policy WIND1 and WIND2.

The obligations relating to negotiation are bilateral - they apply to offshore wind developers and oil and gas developers. The commentary on the oil and gas clause and ministerial statement is referenced with no more emphasis than to list it as a *possible* means of resolving conflict. This does not change the fact that other guidance makes clear the termination of an agreement for lease or lease is a last resort and that coexistence should be sought first.

E.ON is not seeking to apply OG2 in a punitive manner ("at the Applicant's expense"), but in a pragmatic manner to allow the coexistence of the two activities. The extent of the protection E.ON is seeking is to retain a portion of its block free from turbines to allow it to complete exploration work. At Paragraph 297, the explanatory notes acknowledge that *"The seabed area covered by the production licence will be fairly large, to provide a reasonable chance of locating reserves"*. The final footprint of the production facilities will be more limited, but cannot be assessed until exploration and appraisal activities are completed. The protective provisions proposed by E.ON recognise the need to narrow down the area over which the restrictions apply, and by tying the protections to E.ON's licence allow the area to reduce as E.ON surrenders areas in the manner set out in its licence.

E.ON does not agree with the Applicant's reading of paragraph 296. The Applicant states

"Paragraph 296 of the Marine Plans also states that it is for the public authority considering the proposals to consider any impact on existing proposals or developments in its decision. In this context this means that future consenting authorities for E.ON E&P's proposed activities."

This is clearly inaccurate. The full text of paragraph 296 is set out below:

"In situations where there is potential conflict between alternative development opportunities, the relevant public authority considering the proposals would be expected to consider any impact on existing proposals or developments in its decision. Public authorities will need to look at the full range of impacts and benefits when making decisions which could affect oil and gas developments, or when considering oil and gas activities that could affect other developments."

This does not only apply to future applications by E.ON. It states, in clear terms, that it applies to a situation where a relevant public authority is considering potential conflict between alternative development proposals, and immediately follows paragraph 295 which discusses conflicts between Crown Estate agreements for lease over the same areas of sea bed as oil and gas licences. It is therefore clearly of direct relevance to the determination of the Applicant's DCO.



The Applicant's commentary on GOV2

Both parties agree that conflict could be resolved by the imposition of suitable protective provisions for E.ON's benefit. As set out at Deadline 7, E.ON does not consider that the protective provisions proposed by the Applicant adequately protect its interest. At paragraph 18 of Appendix S, the Applicant states:

"These protective provisions seek to avoid interference with E.ON E&P's activities by providing a Protected Area for E.ON E&P's known prospects (subject to the necessary consents for apparatus in the Protected Area being obtained)."

This is not accurate. The Applicant's draft protective provisions only provide protection for apparatus, and not for the full gamut of activities under E.ON's licence which require protection. There would be no protection for seismic activity (since that is not "apparatus" within the Applicant's proposed definition), nor for drilling rigs not owned by E.ON.

As E.ON has not yet sought consent for all stages of its development (and indeed cannot seek consent for production facilities ahead of completing its exploration and appraisal work), the requirement for all activities to have "all necessary consents" before protection applies means that E.ON has no effective protection to stop the Applicant building turbines in the area before E.ON has completed its appraisal activities. E.ON cannot make the financial commitment to exploration activities if its abilities to go on to construct production facilities in respect of reserves discovered is not protected.

Commentary on reconciling the policies

The Applicant's position is not accepted by E.ON. At paragraph 20, the Applicant sets out its approach as follows:

*"The Applicant's position is that by virtue of its Agreement for Lease with the Crown Estate, **policy WIND1 should apply**, affording its interests under the Agreement for Lease protection. **The policy in OG2 should be considered**, and E.ON E&P's proposals given appropriate consideration. "*

For the reasons set out above, policy WIND1 is not the relevant policy to the determination of the DCO application: Policy WIND2 applies. WIND1 should be considered in so far as it provides general support for offshore wind development where an agreement for lease is in place for Round 3 zones.

To say that Policy OG2 should only "be considered", where WIND1 should "apply" is to ignore the specific text which directs how the two relevant wind and oil and gas policies should interact:

"Other policies should be taken into account when applying the support outlined in WIND2. This includes where OG2 is applicable which would take precedence over WIND2".



E.ON therefore refers again to its Deadline 7 submissions, and seeks the inclusion of E.ON's draft protective provisions to allow the policies to be reconciled in the manner set out in the policies.



Part 3: Comments on the Applicant's response to E.ON's Deadline 6 Submissions

E.ON Deadline 6 Submission Table Reference(s)	Applicant Deadline 7 Response	E.ON Response
C9	E.ON E&P provided a number of comments in relation to the SoCG at Deadline VI however these comments were not constructive in allowing the finalisation of a meaningful SoCG. On this basis, the parties' respective positions are more clearly set out in this Appendix.	E.ON's comments were as constructive as could be possible in these circumstances. The comments simply reflect the usefulness or otherwise of the document to which they applied.
C29	The Applicant agrees with E.ON E&P that consultation cannot proceed until the location of a platform is known. The Applicant disagrees with the requirement, as stated by E.ON E&P, that having insufficient information on which to consult implies that the Applicant should then provide a 9 NM free airspace around any potential future location of a platform that E.ON E&P may decide to install within Block 48/3. Such a requirement is not only impractical it has no legal basis and is not stated in any air regulation of which the Applicant is aware. The Applicant has previously responded with regard to E.ON E&P's coexistence proposals at paragraphs 2.1 to 2.7 of Appendix L of the Applicant's response at	E.ON commentary at C29 already made it clear that E.ON recognised the need for a pragmatic solution to allow both the wind farm and the oil and gas development to go ahead as now set out in the protective provisions submitted at Deadline 7.

	<p>Deadline VI, which should be read with the protected provision plan at Appendix X of the Applicant's submission at Deadline VII. The Applicant has previously responded with regard to the aviation assessment and reiterates that the 9 NM zone is a consultation zone and not a prohibition on development (paragraph 4.54 of Appendix H of the Applicant's response at Deadline VI).</p>	
C44	<p>The Applicant has previously responded to the issues raised by E.ON E&P at paragraphs 12.1 to 12.7 of Appendix J of the Applicant's response at Deadline V. The Application advises that no allowance could be made in the ES for a potential pipeline and potential subsea manifold area proposed in post submission consultation material (July 2015) as suggested by E.ON E&P.</p>	<p>E.ON notes that the Applicant's obligation to assess likely significant effects of the project on the environment does not stop at the information it had at the time of submission of the application, when further information has been supplied to it during the course of examination.</p>
D1	<p>The Applicant has previously responded to the issues raised by E.ON E&P at paragraph 4.15 of Appendix H of the Applicant's response at Deadline VI. The Applicant also wishes to advise that as part of the planning process for the Hornsea Round 3 Zone, the Applicant has undertaken a formal Zone Appraisal and Planning process; a method recommended to zone developers by The Crown Estate as part of the Round 3 offshore wind leasing and as a way of managing how each development is taken forward across the entire zone. As part of this process a stakeholder advisory group was established. The Oil and Gas UK were part of this advisory group, who are the leading representative body for the UK offshore oil</p>	<p>Part 4.6 of Chapter 4 of the Applicant's ES outlines how Subzone 2 was identified within the process of Zone Appraisal and Planning. Paragraph 4.6.2 links to the Zone Environmental Assessment methodology. This document (at paragraph 14.22) refers to the fact that:</p> <p><i>Oil and gas industry activities and infrastructure within the Hornsea Zone will be examined over both space and time. To understand the present and future situation regarding oil and gas infrastructure and associated safety zones (i.e., space available for wind farm development) within the Hornsea Zone, existing and potential future scenarios will be examined to identify potential changes in the space available</i></p>

	<p>and gas industry and the trade association for the whole sector (Annex 5 of the Consultation Report (Doc ref No 2.2).</p>	<p><i>for wind farm development. These will consider current and future oil and gas activities (i.e., exploration, development and decommissioning) and identify potential areas of conflict between these two industries.</i></p> <p>This activity was carried out in 2011 – a time when (as identified in previous submissions), E.ON already held a licence over block 48/3. As previously submitted by E.ON, this area of conflict should therefore have been identified and the Applicant would have been aware of it even at this early stage.</p>
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Part 4: Note on Economic Viability

1. Introduction

- 1.1 One of the various reasons that E.ON has provided to explain why the oil and gas clause mechanism is not an appropriate means for resolving the current conflict of interests is that it is unlikely ever to be exercised by an oil and gas developer. This is because the levels of compensation are such that it would make recovering the potential reserves uneconomic and therefore the development would not be sanctioned. In order to provide transparency on E.ON's case on viability, E.ON has provided information below on the economic model used to assess viability of a new oil or gas prospect.
- 1.2 In order to establish whether the Newton prospect was viable if compensation was to be paid to the Applicant, E.ON applied a number of typical assumptions to its economic model and the findings are set out below. We note that estimating the full impact on all four of the known prospects is not feasible given the inherent complexities of gas field development, so E.ON has assessed the impact of differing levels of compensation on the Newton prospect. The results of this analysis show clearly that compensation could not be absorbed for Newton, nor could it be absorbed for the other prospects.
- 1.3 It is worth noting that the question of the 'viability', in the wording of paragraph 2.6.185 of NPS EN-3, of E.ON's licensed interests goes further than just economic viability, if the oil and gas mechanism was to be relied upon as the means of resolving the conflict of interests. The assessment of viability also needs to take into account the various other uncertainties and issues with the mechanism that have been identified in E.ON's submissions to the examination, as well as the fact that the mechanism would only be exercised at E.ON's option.¹

2. Timing of payment

- 2.1 The analysis by E.ON showed that, if E.ON was required to pay compensation at any time prior to commencing production on Newton, development of this prospect is unlikely to proceed. This reflects the very significant up-front cost of drilling those wells before the full reserves of the prospect are determined (which are themselves never accurately known until cessation of production at the end of field life).
- 2.2 So, the economic model was adjusted to assume that compensation would be paid upon commencement of production. Upon further analysis, it was established that a phased approach to the payment was required, as a lump sum payment at commencement of production would have a disproportionately negative effect on the economic model. E.ON would therefore require the payment to be split equally over a period of 10 years from commencement of production, reflecting the

¹ See paragraph 5 and the definition of "Application to the Secretary of State" on page 11 of the Ministerial Guidance.



principle that the Applicant should receive compensation for lost revenue at the time the revenue would have arisen.

3. **Other assumptions**

3.1 In order to provide robust conclusions the following assumptions were applied to the economic model:

3.1.1 Payment would not be required until after gas production has commenced.

3.1.2 The prices used for the calculation are \$50/barrel and 50p/therm. This is a fair to generous pricing model in current market conditions.

3.1.3 Compensation is assumed to be £13M per turbine (the lower end of the £13-14.6M estimate provided by the Everose study - See E.ON's Deadline 5 submission Appendix 9).

3.1.4 Foreign exchange Rate: £/\$ 1.5.

3.1.5 Discount rate for discounted cashflow analysis is 10%.

3.1.6 No inflation to either project costs, compensation or prices was included

4. **Outcomes of modelling exercise in relation to Newton**

4.1 The analysis showed that the net present value of Newton would turn negative (i.e. loss making) if compensation were to be paid on 11 turbines.

4.2 E.ON would not sanction a project where compensation was payable for eleven (11) turbines as this represents less than the required rate of return for E&P projects undertaken by the E.ON Group. The minimum rate of return required is determined by a number of factors and reflects the significant amount of capital invested and at risk prior to confirmation of a commercial discovery.

4.3 Therefore, the maximum number of turbines that the economic model showed that E.ON could bear in terms of compensation payment without the Project becoming economically unviable is five (5) turbines.

5. **Extending viability analysis to the other known prospects**

5.1 Newton was selected for analysis as that is the prospect about which the most is known, and therefore offers the most robust conclusions. However, E.ON's interests cover the other known prospects (being Newton Deep, Dodgson and Joly), and an appraisal of viability ought to reflect the potential production across all prospects in order to establish the total impact on E.ON.



5.2 E.ON has therefore considered the likely costs of production and likely comparative size of reserves for the other known prospects. Whilst it is possible that future capital and operating costs for production would be lower if these prospects were tied in (i.e. export pipes from each well connected to a 'hub' at Newton and then exported to, for example, E.ON's existing facility at the Babbage Field) to Newton, E.ON's best estimate of the likely reserves in each prospect indicate that each of the other prospects is likely to yield significantly less value than Newton.

5.3 As a result, and applying a fair to generous assumption that such costs would be less for these prospects, given that production infrastructure and pipelines would already have been constructed and therefore potentially available for tie back, it is clear that the other known prospects could not support as many as 5 turbines each.

5.4 For the whole of the area reserved in the protective provisions, based on it base case assumptions, E.ON therefore estimates that compensation for no more than 14 turbines could be supported without rendering development of the prospects economically unviable.

6. **Effect on overall E.ON viability**

6.1 Without mitigation in the form of protective provisions, the Applicant's scheme would place the following numbers of 5MW turbines over the area shown on E.ON's protective provisions plan:

6.1.1 Layout 1 – 74

6.1.2 Layout 3 – 67

6.2 In each case, without mitigation, the Applicant's proposals are therefore likely to render E.ON's development of Block 48/3 economically prohibitive. As a result, if E.ON was obliged to request the exercise of the oil and gas clause in the AfL in order to develop the Block, it is highly likely that E.ON would cease work and relinquish Block 48/3 in its entirety.



Appendix 1: Deadline 7 Errata Sheet

E.ON E&P wishes to correct a number of errors to percentages contained in paragraphs 2.13.3 - 2.13.5 and 2.13.10(d) of its Deadline 7 submission. These percentages required updating as a result of the inclusion of the additional 1nm area into the proposed protective provisions area.

The text below contains the correct values and E.ON requests that the ExA substitute this text when reading the Deadline 7 submission.

Paragraph 2.13.3

The coloured area provides sufficient access to known prospects Joly, Newton, Newton Deep and Dodgson. The area is designed to allow for the absolute minimum amount of flexibility needed to drill exploration and appraisal well(s) in either of the prospects and represents 47.8% of the overlapping area of interests. The area includes two 500m pipeline exclusion zones, which prohibits any turbine foundations from being installed, as well as E.ON drilling activities. E.ON's licence for Block 48/3 requires an exploration well to be drilled no later than the end of June 2019. This is to confirm the presence of hydrocarbons for its known prospects. However, exploration drilling by its nature only provides basic data on the presence of a hydrocarbon reservoir. Having established the presence of hydrocarbons via an exploration well, complex appraisal well(s) are then drilled, usually at the extremities of the known field (e.g. in the furthest east areas of the known prospects), to further examine both the vertical and horizontal extent of the reservoir including the composition of potential hydrocarbons (e.g. gas, oil and associated water interfaces).

Paragraph 2.13.4

The impact on E.ON of this proposed compromise arrangement is considerable. Approximately 52.2% of the overlapping area of Block 48/3 and the proposed windfarm is left free for the Applicant to develop. For the reasons set out above, this effectively means that E.ON is giving up its rights to explore and exploit the larger part of its Block, for no compensation. It is also accepting the very real risk that the known prospects turn out to be substantially larger than currently estimated. In those circumstances, E.ON would effectively be unable to drill larger areas of those prospects to the east of the coloured area. Its only option would be to directionally drill from outside the area. As noted in paragraphs 2.4 and 2.5 above, this form of drilling would be extremely expensive, also the geology in the area of Block 48/3 means that it is quite possible that it could not be achieved at all. This is despite the fact that having four prospects in a single Block is considered indicative of high prospectivity and there is a high potential for further hydrocarbons to be discovered in the area beyond the known prospects.

Paragraph 2.13.5

There would be a limited impact on the Applicant. It would be free to develop approximately 52.2% of the overlap area. Approximately 15.1% of the coloured



area would be sterilised anyway as a result of the existing pipeline exclusion zones around the pipelines, shown in the plan in Appendix 2. The maximum net impact on the Applicant is therefore a restriction on approximately 40.6% of the overlap area and approximately 16.4% of the entire area of P2. The loss of that area is such that it is still feasible that the Applicant could still reach its maximum capacity targeted by the use of larger turbines and/or optimising the layout in the available space, as set out in more detail at section 2.5 above.

Paragraph 2.13.10 (d)

In relation to paragraph 2.6.185, while viability of a large part of the Block is affected, viability of the known prospect is preserved and E.ON is willing to take a pragmatic view on the loss of the potential prospects in the remaining 52.2% % of the overlap area.

Please also note the updated figures contained at paragraph 6.1 of Section 4 of this submission and referred to at paragraph 14(iii) of Part 1 above, which update paragraph 2.7.5 of E.ON's deadline 7 submission. It should also be noted that it is still feasible that the maximum capacity targeted by the Project could still be reached within the available area by the use of larger turbines or alternate layouts.