

**DOGGER BANK SOUTH OFFSHORE WIND FARM PROJECTS (DBS PROJECTS)
DEADLINE 5 SUBMISSION**

**DOGGER BANK OFFSHORE WIND FARM PROJECT 1 PROJCO LIMITED,
DOGGER BANK OFFSHORE WIND FARM PROJECT 2 PROJCO LIMITED AND
DOGGER BANK OFFSHORE WIND FARM PROJECT 3 PROJCO LIMITED**

INTRODUCTION

1. Dogger Bank Offshore Wind Farm Project 1 Projco Limited (**DBA Projco**) is a statutory undertaker for the purposes of the Planning Act 2008. DBA Projco has the benefit of development consent for the Dogger Bank A Offshore Wind Farm (**DBA**) which was granted pursuant to The Dogger Bank Creyke Beck Offshore Wind Farm Order 2015 as amended (the **DBA/DBB DCO**).
2. Dogger Bank Offshore Wind Farm Project 2 Projco Limited (**DBB Projco**) is a statutory undertaker for the purposes of the Planning Act 2008. DBB Projco has the benefit of development consent for the Dogger Bank B Offshore Wind Farm (**DBB**) which was granted pursuant to the DBA/DBB DCO.
3. Dogger Bank Offshore Wind Farm Project 3 Projco Limited (**DBC Projco**) is a statutory undertaker for the purposes of the Planning Act 2008. DBC Projco has the benefit of development consent for the Dogger Bank C Offshore Wind Farm (**DBC**) which was granted pursuant to The Dogger Bank Teesside A and B Offshore Wind Farm Order 2015 as amended (the **DBC DCO**).
4. DBA, DBB and DBC are due to commence commercial operation between 2025 and 2027 and so will be operational before construction of the Dogger Bank South (**DBS**) Projects commence.
5. DBA Projco, DBB Projco and DBC Projco (together the **Projcos**) are making this submission in respect of the Applicants' approach to wake loss in respect of DBA, DBB and DBC and the interaction with the DBA and DBB order limits. This submission builds off the Projcos' previous submissions at Examination, including:
 - (a) Relevant representation (RR-007);
 - (b) Deadline 1 Submission (REP1-071);
 - (c) Deadline 2 Submission (REP2-071);
 - (d) Deadline 3 Submission and Response to the Examining Authority's (ExA) First Written Questions (REP3-063); and
 - (e) Deadline 4 Submission (REP4-117).
6. The Projcos' response to the Examining Authority's (**ExA**) Second Written Questions (**ExQ2**) is set out in this submission. The Projcos' preferred protective provisions are also appended at Appendix 1.
7. The Projcos have submitted their Wake Loss Assessment Report (Assessment of Potential Dogger Bank South Wake Impacts) as a standalone document at Deadline 5.
8. The following section briefly summarises the Projcos' position as captured throughout the submissions noted above (both submitted historically to this Examination and within the documents provided for Deadline 5).

SUMMARY

9. On 24th April, the Department for Energy Security and Net Zero (DESNZ) published revisions to the National Policy Statements (NPS) for consultation. This included revisions to EN-3 relating to wake impacts. Whilst these revisions were published ahead of Deadline 4 on 25th April, the Projcos' Deadline 4 submission was only able to provide an initial view of these proposed amendments given the limited time to do so. Nevertheless, the Projcos' submissions within Deadline 4 remain valid and are built on below in response to the ExA's second round of questions, specifically IOU.2.3, IOU.2.4 and IOU.2.5. Critically, the proposed amendments to EN-3 in respect of wake loss clearly continue to support the precedent that was set by the Awel y Môr determination in requiring assessment and consideration of mitigation of impacts of wake loss.
10. The Projcos welcome the submission of the Applicants' Wake Loss Assessment at Deadline 4 [REP4-099] and recognise this as a first step in addressing some of the Projcos' previously expressed concerns over the fundamental lack of such an assessment. However, the Projcos' responses to IOU.2.15 below combined with the detail provided in the Projcos' own assessment (Assessment of Potential Dogger Bank South Wake Impacts, the "**Wake Loss Assessment Report**") clearly demonstrate that the Applicants' assessment remains lacking in various ways, including through its exclusion of projects which will be materially impacted by wake from Dogger Bank South (notably Dogger Bank B and Dogger Bank C). In addition, as outlined in the responses below to IOU.2.15 and IOU.2.16, there are a number of points where the Applicants would appear to have used inappropriate data in reaching their conclusions or to have misrepresented the nature of the wake loss that will be experienced by the Projcos. Such aspects clearly raise questions around the reliability of the results presented by the Applicants.
11. As requested by the ExA, the Projcos have provided further explanation of the calculation of losses previously presented in REP4-117 within their Wake Loss Assessment Report. These losses, **exceeding half a billion pounds over the life of the projects**, are material, and the Projcos note the potential for these values to be even higher if DESNZ wholesale electricity prices come to pass as outlined in Section 4.3 of the Wake Loss Assessment Report. It should be noted that the scale of financial impact at the level outlined in the Projcos' Wake Loss Assessment Report is clearly of material concern and, notwithstanding the fundamental concerns over REP4-099 that the Projcos have detailed in these Deadline 5 submissions, would remain such even if the Applicants' wake loss percentages were valid. In either case, these represent a significant economic loss to the Projcos' assets. Consequently, it is vital that opportunities for mitigation, including compensation, are secured.
12. The Projcos' form of protective provisions provided in Appendix 1 present the most appropriate method to resolve the Projcos' outstanding concerns. Firstly, they allow for later reassessment of wake loss, accounting for final design and providing the opportunity to explore and account for any further mitigation that the Applicants may adopt. These protective provisions further then allow for the payment of sums for any remaining financial loss which cannot be mitigated through other measures. Finally, the proposed protective provisions allow for arbitration to account for the fact that differences may exist between the Applicants and the Projcos' positions, including in the modelling itself as well as in the subsequent determination of the residual financial impact.

PROJCOS' RESPONSE TO THE EXAMINING AUTHORITY'S SECOND WRITTEN QUESTIONS

Question	Projcos' Response
IOU.2.3	<p><i>2025 revisions to the energy NPSs – wake loss</i></p> <p><i>Provide your view on the following proposed changes to the energy NPSs, with regards to the implications on wake loss for the assessment of this application:</i></p> <ul style="list-style-type: none"> • <i>The inclusion of the government's Clean Power 2030 Action Plan.</i> • <i>The recommendation that at the design stages for proposed offshore wind farms, an assessment of inter-array wake effects should be undertaken to inform and support the consideration of potential mitigations.</i> • <i>The requirement that developers should make reasonable efforts to demonstrate that they have considered how to manage the impact of wake effects on other occupiers and set out non-exhaustive examples of what this could include, such as how the project configuration has been evolved during the design process to reduce the impact or avoid the most impactful configurations, or manage the planned layout of an offshore wind turbine array to select layouts with reduced long-distance wake impact on other occupiers.</i> • <i>The addition of paragraphs 2.8.176, 2.8.232, 2.8.233 and 2.8.316 to draft NPS EN-3.</i> <p><i>(You may wish to cross reference the answer to this question with BGC.2.6.)</i></p> <p>The Projcos welcome the proposed changes to the energy NPSs, although it is noted that these remain subject to consultation and may change further prior to designation, and as such, only limited weight can be placed on the current revisions.</p> <p>The Projcos note that the revised NPSs provide absolute certainty that “other offshore infrastructure and users” is to be read as including other offshore wind farms and that wake loss assessments are required in respect of other projects that are in planning, consented or operational. This supports the Projcos' position throughout this examination.</p> <p>The Projcos note the wording in 2.8.316 which sets out that residual wake effects are likely to only be afforded limited weight (provided that an applicant can demonstrate compliance with certain steps), although, in practice, determining what is a ‘residual’ effect may prove challenging as relatively small percentages can have significant economic and real-world consequences. Moreover, a ‘residual’ effect may, in fact, be likely to affect the future viability of an offshore wind project such that para. 2.8.314 of NPS EN-3 is engaged with the Secretary of State obliged to give such an adverse effect substantial weight in its decision making.</p>

	<p>Ultimately, it is correct and appropriate that wake loss impacts should be a matter for the Secretary of State to consider in the planning balance as a case-by-case basis when considering an application.</p> <p>The Projcos acknowledge and accept the point in para. 2.8.233 that wake effects cannot be wholly removed between developments. However, there is a clear obligation under para. 2.8.232 to “minimise as far as possible the impact of wake effects”, suggesting that, where there is a “small” (in percentage terms) wake effect impact, there must still be an exercise to seek to reduce this further. This must be undertaken at the design stage (both pre-application design and post-consent detailed design). The Applicants have confirmed that they have not considered wake effects in the pre-application design of their project. The only mechanism to ensure that design mitigation for wake effects is considered at the detailed design, post-consent stage is if it is secured within a Development Consent Order (e.g. via protective provisions).</p> <p>The Projcos consider that the proposal to remove compensation agreements for wake effects from the planning process (as currently expressed in 2.8.233) is problematic, as it could be interpreted by developers as suggesting that certain mitigation for wake effects does not fall within the planning regime and is also in direct contradiction to the remainder of the NPS wording (which clearly provides that wake loss assessment and mitigation <i>does</i> fall within the planning regime). It is necessary that mitigation of wake effects can remain within the planning regime if appropriate (i.e. if impacts are considered significant). There is currently no mechanism “outside of the planning process” for wake to be considered and mitigated, which is a significant flaw in the wording of 2.8.233. In particular, there is no certainty that an applicant will continue to engage outside of the planning process and no mechanism (such as arbitration or similar) for the impacted party to secure such engagement outside of the planning system. The Projcos’ position is that, in this case, such compensation is necessary for several reasons, including the fact that it is a key form of mitigation in itself and that the Applicants cannot demonstrate any compliance with paragraph 2.8.232. Paragraph 2.8.233 needs to be read in that context, but, in any event, it will be subject to detailed responses as part of the consultation process on the draft NPSs.</p> <p>As identified above, para. 2.8.233 is especially problematic given the Applicants’ repeated failure to engage with the Projcos on the issue of wake loss (until recently, ahead of Deadline 5) – it is important that there is an independent approval process, secured within the Development Consent Order, to avoid a continued impasse.</p> <p>The Projcos consider that the Applicants would be unable to satisfy the terms of the proposed NPSs, namely:</p> <ol style="list-style-type: none"> 1. No assessment of inter-array wake effects has been included with the application, despite the commitment to do so in the submission version of the Environmental Statement. The Applicants have subsequently submitted a response to ISH3 action points [REP4-099] and greenhouse gas sensitivity analysis of wake effects [REP4-095]; however, this has not been prepared in consultation with the affected DB Projcos. 2. Only limited potential mitigations have been considered by the Applicants, who have not taken all reasonable steps to minimise as far as possible the impact of wake effects on the Projcos.
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	<p>3. Similarly, the Applicants have not demonstrated that they have made reasonable efforts to work collaboratively with the Projcos on the potential impacts of DBS on DBA, DBB or DBC.</p> <p>The Projcos therefore do not consider that the Applicants comply with the proposed wording of 2.8.316 and, as such, it would not be correct to conclude that the existence of a residual wake effect impact should carry no more than limited weight. Significant weight should be placed on the Applicants’ failure to engage properly with the impacts of DBS on the Projcos’ assets and on the significant, unmitigated wake impacts that DBS will have on DBA, DBB and DBC.</p>
IOU.2.4	<p>2025 revision to NPS EN-3 – wake loss</p> <p><i>How do you interpret the word ‘nearby’ in draft NPS EN-3 paragraph 2.8.176 regarding the need to assess inter-array wake effects between proposed offshore wind farms and ‘nearby’ offshore wind generating stations? How would you apply this to the proposed development, and which planned, consented or operational offshore wind farms do you consider would be ‘nearby’ to the proposed development?</i></p> <p>The Projcos consider that, in the absence of any definition or clarity from government within NPS EN-3, “nearby” must be given its ordinary meaning, which implies a degree of proximity between projects. However, there is no basis on which to conclude that “nearby” would be restricted to 7.5km or otherwise aligned to distances set by The Crown Estate as part of the leasing process (which, by TCE’s own admission [REP3-039; REP1-071 at Appendix 1], were not selected specifically as a reference point or buffer for wake loss). Indeed, the Projcos note that submissions arguing that “close” should be interpreted as meaning either within 7.5km or 10km had been advanced by other project promoters at examination prior to the consultation versions of the NPSs being issued. Had Government intended “nearby” or “close” to align with such distances, this would have been directly stated in the revised NPSs.</p> <p>In carrying out an environmental impact assessment or assessments under the Habitats Regulations, it is typical practice to identify the “study area” that is relevant for a particular receptor and pathway to an effect. As an example, ornithological and marine mammal assessments, when considering ‘nearby’ sites for the purposes of Habitats Regulations assessments, will extend to significant distances – and these will often vary further in the context of different species (which will have different foraging or breeding ranges).</p> <p>Wake loss must follow a similar approach, as impacts are not solely based on proximity but a complex combination of distance, wind direction, turbine parameters, site size and design layout. It is inappropriate to simply fix an arbitrary distance beyond which wake loss should not be considered.</p> <p>In the absence of any clarity, the Projcos consider that “nearby” must be read within the context of the wider policy on wake loss and with reference to the nature of wake impacts generally. In the case of Dogger Bank South, it is clear from the wind rose shown at Figure 5 of the Projco’s Wake Loss Assessment Report that the project sits directly downwind of DBA, DBB and DBC in the prevailing wind direction.</p>

	<p>Further, in this regard, it is notable that para. 2.8.232 of EN-3 refers to “long-distance wake impact”, suggesting that “nearby”, when used in relation to wake loss, extends to potentially long distances. The Projcos therefore consider that DBA, DBB and DBC are all “nearby” to the proposed development and should consequently be assessed.</p>
IOU.2.5	<p>2025 revision to NPS EN-3 – wake loss</p> <p><i>Do the proposed changes to NPS EN-3 give direction on which party holds responsibility for carrying out a wake loss assessment? If so, what implication does this have for this examination?</i></p> <p>The proposed changes to NPS EN-3 give a clear direction that the initial responsibility for carrying out a wake loss assessment should be with an applicant. This is the case under the existing NPSs, and this wording simply provides more specific policy. It is considered by the Projcos that this is a logical starting point for several reasons:</p> <ol style="list-style-type: none"> 1. As the ‘agent of change’, it is appropriate that an applicant should undertake the initial assessment as, without an applicant’s project, there would be nothing to consider and assess. 2. There is a robust pre-application consultation process that allows for an applicant to obtain feedback from impacted parties on its assessments. 3. At the pre-application stage, in particular, only the applicant will know the details of what is proposed as part of their project (i.e. maximum turbine parameters, possible site locations, turbine layouts, etc.). Information regarding consented, constructed and operational projects will, at that stage, largely be in the public domain and so it is therefore easiest for the applicant to carry out the initial assessments. 4. It is for the applicant to assess the impact of its project and, having identified an adverse impact, to apply the mitigation hierarchy in the design of its project before submitting its application for development consent. <p>The draft NPS is consistent with the position that the Projcos have adopted throughout the examination of this project. In terms of this examination, the Applicants have not submitted this assessment with their application and they have confirmed that they have not considered wake loss in the design of their project.</p> <p>However, the Projcos consider that it would be incorrect and irrational for an applicant’s assessment to be preferred or accepted with no examination from the impacted party, together with other stakeholders as appropriate. This is because the impacted party is likely to hold commercially sensitive information that would inform the accuracy and final result of a wake loss assessment. This might include specific yield data from within a site and other operational data, pricing assumptions, contractual requirements, or similar.</p>

IOU.2.12	<p><i>DL4 submission on wake loss</i></p> <p><i>Provide the wake loss assessment which was carried out for Dogger Bank A, B and C in a report format which sets out the inputs and assumptions, method, results and conclusions of the wake loss assessment.</i></p> <p>The Projcos have submitted their Wake Loss Assessment Report at Deadline 5, provided as a standalone document (Assessment of Potential Dogger Bank South Wake Impacts). This sets out the inputs and assumptions, method, results and conclusions of the wake loss assessment carried out for Dogger Bank A, B and C.</p>
IOU.2.13	<p><i>DL4 submission on wake loss</i></p> <p><i>In paragraph 12 of your submission on wake loss [REP4-117], you suggest that an indicative estimate of the annual impact of wake loss from the proposed development could be £20 million and £582 million for the total period of concurrent operations. Clarify the following points:</i></p> <ul style="list-style-type: none"> <i>• Provide a detailed explanation of how these figures were calculated.</i> <i>• Provide more information on Contract for Difference Strike Prices and how much do they fluctuate annually.</i> <i>• To what extent would such losses impact the viability of the respective offshore windfarms – evidence your answer.</i> <p>A detailed explanation for how the financial figures were calculated is provided in section 4.3 of the Projcos' Wake Loss Assessment Report.</p> <p>Under the terms of the Contract for Difference (“CfD”), the Projcos earn revenue at the Strike Price for every MWh produced during the term of the CfD. As such, the Projcos are only paid for the electricity generated; if no electricity is produced, no revenue is earned.</p> <p>In relation to the Contract for Difference Strike Price, broadly this increases annually by CPI. Detailed guidance on the annual adjustment to the Contract for Difference Strike Price, the Strike Price Adjustment (“SPA”), is publicly available on the Low Carbon Contracts Company website at the following link: <u>Strike Price Adjustment (SPA) Guidance - March 2025 - Low Carbon Contracts</u>.</p> <p>The SPA is updated annually effective from 1 April each year. The three elements of the annual strike price adjustment are:</p> <ul style="list-style-type: none"> • Indexation Adjustment • TLM(D) Strike Price Adjustment • Base Year Initial Balancing System Charge <p>The indexation adjustment is the most significant driver in the SPA. The price is updated annually for CPI. The mean CPI over the previous 12-month period from February to January is used. TLM(D) Strike Price Adjustment is a very minor factor in the Strike Price Adjustment. The Base</p>

	<p>Year Initial Balancing System Charge is a permanent adjustment in the Strike Price to take account of the fact that generators no longer pay BSUoS charges, which previously were compensated for under the CfD.</p> <p>The Projcos have provided a calculation of the financial impact of the calculated wake losses on the Projcos in section 4.3 of the Projcos’ Wake Loss Assessment Report. This assessment concludes that the average AEP impact across the Projcos is 2-2.1%. As set out above, during the term of the CfD the Projcos earn revenue at the Strike Price for every MWh produced; if electricity is not produced, no revenue is earned. Therefore a 2-2.1% AEP reduction results directly in a 2-2.1% reduction to revenue. As the same number of turbines would still be running, just producing less, there is no reduction in operating cost as a result of this AEP impact.</p> <p>The Projcos secured CfDs in a highly competitive CfD auction and are financed through a combination of equity and long-term senior debt from a large club of third-party lenders. Due to the highly competitive nature of the CfD auction, the Projcos’ financing solutions are necessarily highly optimised; this resulted in then-record low Strike Prices being achieved (and these remain close to the record low Strike Prices awarded in any offshore wind CfD auction) which results in reduced costs to consumers.</p> <p>A permanent annual revenue loss of 2-2.1% on average across the Projcos, that could not have been taken account of in setting the CfD bid price or in the original financings, results in a revenue loss of £20m per annum. This represents a significant economic loss to the Projcos and is an impact that the senior debt lenders would not have considered when setting their covenants.</p> <p>Considering the various factors currently adversely affecting the offshore wind sector in Great Britain, such as rising supply chain costs and increasing interest rates, financial losses of this nature could further impact investor confidence at a critical juncture, threatening the ability for government to meet its Clean Power 2030 ambitions.</p>						
IOU.2.15	<p><i>Wake effects - response to ISH3 action points and greenhouse gas sensitivity analysis of wake effects</i></p> <p><i>Provide a view on the applicants’ wake effects - response to ISH3 action points [REP4-099] and greenhouse gas sensitivity analysis of wake effects [REP4-095]. To what extent do you agree or disagree with the assessments and their findings, and why?</i></p> <p>Whilst the publication of a wake impact assessment by the Applicants in REP4-099 is welcome, the Projcos disagree with the estimated wake impacts which are significantly lower than the assessment conducted by the Projcos in their own Wake Loss Assessment Report. The Projcos do not accept the findings of this assessment and have identified a number of issues and risks with the methodology presented. These include:</p> <table><tr><th>Location in REP4-099</th><th>Risk Description</th><th>Potential Impact and Discussion</th></tr><tr><td></td><td></td><td></td></tr></table>	Location in REP4-099	Risk Description	Potential Impact and Discussion			
Location in REP4-099	Risk Description	Potential Impact and Discussion					

	Section 2: Point 7	The report states that “a capacity factor of 55% for DBA has been used to scale results.” However, it is unclear how and when in the analysis this scaling has been applied.	Without knowing how this scaling has been applied and the magnitude of the adjustment, the impact of the assumption could range from minor impact to major error in the resulting wake impact result.
	Section 2.1: Point 9	It is stated that data from the Cavendish platform LiDAR has been used to derive the wind conditions at the sites. However, there is good quality, publicly available wind data available closer to the target sites (DBA, DBB and DBC) from the Dogger Bank West Mast, Dogger Bank East Mast, and Dogger Bank East LiDAR (as depicted on Figure 6 of the Projcos’ Wake Loss Assessment Report).	It is considered best practice in wake modelling to utilise the most accurate wind data for the target site, in this case Dogger Bank West and East masts. For DBA, the distance from the Cavendish LiDAR to the site centre is ~33 km as opposed to only ~12 km to the site centre from the Dogger Bank West Mast. Initial investigations into the impact of using the wind direction distribution from Cavendish LiDAR rather than the Dogger Bank West Mast to represent the wind conditions at DBA suggest that this could notably reduce the predicted wake impact of DBS on DBA. It is noted that the Dogger Bank West mast has been processed and used to derive turbulence intensity (TI) conditions at the sites, which is considered more accurate for the TurbOPark and Eddy Viscosity wake models.
	Section 2.1: Point 11	ERA5 reanalysis data was trimmed to 2004-2020.	While a 16-year long-term reference is considered reasonable, it is not clear why the data is cut off at 2020. Generally, a longer reference period including the most recent data is advised to reduce the risk of bias.
	Section 3.1: Point 24	It is stated that ‘industry standard methods’ have been used to extrapolate the wind regime from the measurement location to the sites. However, the models used for both vertical and horizontal extrapolation have not been stated.	Given the distance between the Cavendish Platform LiDAR and the DBA, DBB and DBC sites, the model or wind map used to horizontally extrapolate could have a noticeable impact on the resulting relative windspeeds and therefore wake impacts.

	Section 3.1: General	This section lacks any significant detail, particularly on the resulting hub height windspeeds at any of the windfarms.	The lack of detail prevents any meaningful review of the wind data processing approach.
	Section 3.2.1: Point 30	It is unclear what version and settings for the Deep Array Wake Model (DAWM) have been used.	Results can vary significantly depending on which exact setup of the DAWM has been used, therefore more information is required to assess if the implementation used here is suitable.
	Section 3.2.2	A TurbOPark model was run by RWE with the addition of a Rankine Half Body blockage model. No details of the software or model setup are provided.	While the TurbOPark wake model has a reasonable validation presented by the code originator (Ørsted), as with all wake models the setup is key, and indeed the implementation software is not described. For example, if the OpenWind software (same as Eddy Viscosity) was utilised there are 3 separate implementations of TurbOPark, each giving different results. Without details of the implementation, it is not possible to review the validity of the model results.
	Section 3.2.3	RWE have also modelled the wake impact using their in-house “VV”. No details of the model are given, no validation of the approach is presented.	Without details it is not possible to review this wake model and without a detailed validation and independent inspection it is not appropriate for use in this context.
	Section 3.3: Point 40	17 years of ERA5 wind data has been used to derive an inter-annual variability.	It is not clear why data up to the current year has not been used here, and a shorter dataset has a higher risk of bias.
	Section 5: Point 49	The report uses point 47 to imply that losses on DBB and DBC would be too small to be worth investigating.	As pointed out in Section 2.2 point 13, it is common practice to include windfarms of over 50km distance to the site in wake modelling, particularly when there is not a significant stretch of open water between wind farms where any wake effects may dissipate. The distance between DBB and DBS is

			around 17km, which should be considered close in terms of wake modelling. Although the direct distance from DBS to DBC is greater than 50 km, there is not a continuous stretch of open water where wakes may dissipate.
	<p>The methodology taken by the Applicants to perform their greenhouse gas sensitivity analysis of wake effects [REP4-095] is consistent with the Projcos' expectations. However, the Projcos cannot accept the results of this assessment due to the differences in wake losses with the Projcos' assessment. The claim in point 48 of the Applicants' assessment that the <i>highest</i> hypothetical wake scenario of 2.0% is considered conservative is incorrect as the Projcos' wake assessment shows the <i>average</i> wake loss on DBA, DBB, and DBC is 2.0 – 2.1% and could exceed this.</p>		
IOU.2.16	<p><i>Wake effects - response to ISH3 action points</i></p> <p><i>To what extent do you agree with the stated background level of environmental fluctuation in energy yield from variations in weather of 5.4% referred to in Table 2 [REP4-099], and the applicants' statement that effects from wake loss would fall within the natural variability of the weather and therefore, the impacts from wake loss would be "lost in the noise" of the natural variation of the wind?</i></p> <p>The background level of environmental fluctuation in energy yield from variations in weather of 5.4% determined by the Applicant is in line with the Projcos' expectations for the Dogger Bank area. However, the Projcos strongly disagree with the basis of the Applicants' comparison of wake loss to the inter-annual variability ("IAV") in weather and any claims that wake loss would be "lost in the noise". Wake loss should be considered as a bias always reducing the energy produced by DBA, DBB, and DBC each year. IAV is accounted for in modelling the yield on which all project investment decisions are made, whereas wake effects are an additional, consistent impact each year. IAV does not offset wake impacts, and, unlike wake effects, can increase or decrease energy production.</p> <p>The Projcos have sought advice from an independent consultant to address the claim made in point 48 of the Applicant's wake assessment that: "The result of this is that it would take in the order of 20 years of measurement of the annual production of DBA to be able to show, to a 95% confidence, that the impact of DBS was not zero." However the independent consultant engaged by the Projcos has confirmed that it has been repeatedly shown that smaller than 2% wake loss changes can be observed in operational data once account is made for the windiness of the operational period. It is further unclear as to why a 95% confidence threshold is required.</p>		
IOU.2.21	<p><i>Wake loss approach to requirements and protective provisions</i></p> <p><i>Paragraph 36 of your DL4 submission [REP4-117] reviews the potential of any requirement (and in turn protective provision) to deal with the effects from wake loss resulting from the proposed development against 'the 6 tests'. The ExA notes your comments on enforceability and</i></p>		

	<p><i>reasonableness, however, given the difference in position between you and the applicants, do you think that it is likely that you would be able to find agreement in discharging a requirement following grant of a DCO (if approved)? If not, is any requirement of this nature reasonable and enforceable?</i></p> <p>It is a fundamental principle in planning that a lack of engagement by an applicant in respect of a material issue (be that assessing it or securing mitigation for it) does not obviate the need to secure the matters necessary to address and resolve that material issue. The Projcos consider that the lack of engagement to date from the Applicants around wake loss, and the difference in position between the Projcos and the Applicants, reinforces the critical need to secure within the Development Consent Order an independent approval process to avoid any impasse and to ensure that potentially significant adverse effects are assessed, understood and mitigated.</p> <p>Indeed, this is one key reason why the Projcos have moved towards the need for protective provisions.</p> <p>The Projcos note that the DCO drafted and submitted by the Applicants already includes protective provisions that secure approval and arbitration processes in respect of matters that might be disputed (e.g. protective provisions in favour of Network Rail). The Projcos consider that the approach put forward in their preferred protective provisions is more justifiable, as it does not require the approval of the affected party (as with Network Rail's protective provisions, which could result in an unresolvable impasse), but instead requires a third-party approval. The Projcos consider that this is preferable to imposing a requirement to enter into an agreement with the Applicants (with arbitration as a fallback if not agreed), although the Projcos consider that this would be an enforceable and reasonable approach in any event.</p> <p>The reasonableness and enforceability of protective provisions (or a requirement) should not be considered with reference to the likelihood of any dispute or possibility of resolution. Indeed, it is the exact opposite: if an impact is a material issue in planning terms and the parties disagree about the existence, extent or resolution of that impact, it is critical that a robust mechanism to secure mitigation of that impact is included within any planning consent granted. The Applicants have not demonstrated policy compliance or justified their approach throughout the examination; they have instead relied on an argument that this is not a matter for planning, ignoring recent precedent in the Awel y Môr case in the hope that this would be reversed and in spite of the clear recognition of this precedent in the Clean Power 2030 Action Plan. The protective provisions offer a way for consent to be granted in spite of this, whilst affording the necessary protection to committed infrastructure.</p>
IOU.2.22	<p><i>Wake loss – protective provisions</i></p> <p><i>Projco IPs, Ørsted IPs: submit a copy of draft protective provisions for consideration regarding the matter of wake loss</i></p> <p>The Projcos have included their preferred protective provisions regarding the matter of wake loss (Appendix 1). These are substantially aligned with the protective provisions to be submitted by the Ørsted IPs at Deadline 5.</p>

	<p>The Projcos note that, to date, no protective provisions for the benefit of another offshore wind farm in respect of wake loss have been included in a made DCO. However, preferred protective provisions have now been put forward by impacted projects in other examinations, including the Outer Dowsing Offshore Wind (Generating Station) examination. In Outer Dowsing, preferred protective provisions were submitted by (i) Equinor New Energy Limited and (ii) Ørsted, both acting on behalf of numerous affected projects.</p> <p>These protective provisions, while drafted in different terms to those preferred by the Projcos, follow the same principles of requiring further wake loss assessments, design mitigation and, ultimately, compensation should design mitigation be unfeasible. The Projcos consider that any differences in drafting reflect the rapidly evolving position on wake loss assessment and mitigation (which is being shaped further by the introduction of proposed revisions to the NPSs) as well as differences in the course of the examinations but that the alignment in principles across different developers and projects underscores the significance of the issue to industry and the need for it to be robustly dealt with within the planning system.</p>
IOU.2.23	<p><i>Wake loss – arbitration</i></p> <p><i>If the ExA or SoS determined that a requirement or protective provisions to address wake loss effects was necessary, to what extent do you think that arbitration would be useful or necessary in protecting the interests of all parties involved?</i></p> <p>While this question was only addressed to the Applicants and the Ørsted IPs, the Projcos consider it helpful to set out their position on arbitration for completeness.</p> <p>The Projcos consider that arbitration has an important role to play in protecting the interests of all parties involved. The Projcos’ protective provisions (included at Appendix 1) make provision for arbitration to apply in the event of any disputes under the protective provisions.</p>

CMS CAMERON MCKENNA NABARRO OLSWANG LLP

23 MAY 2025

Appendix 1 – Projcos’ Preferred Protective Provisions

PART [X]

For the protection of Dogger Bank Offshore Wind Farm Project 1 Projco Limited, Dogger Bank Offshore Wind Farm Project 2 Projco Limited and Dogger Bank Offshore Wind Farm Project 3 Projco Limited

1. The provisions of this Part of this Schedule have effect, unless otherwise agreed in writing between the undertaker and the relevant DB Projco.

2. In this Part of this Schedule—

“AEP” means annual energy production;

“authorised project” has the meaning defined at article 2(1);

“DBA” means the Dogger Bank A Offshore Wind Farm consented by The Dogger Bank Croyke Beck Offshore Wind Farm Order 2015 (as amended);

“DBA Projco” means Dogger Bank Offshore Wind Farm Project 1 Projco Limited;

“DBB” means the Dogger Bank B Offshore Wind Farm as consented by The Dogger Bank Croyke Beck Offshore Wind Farm Order 2015 (as amended);

“DBB Projco” means Dogger Bank Offshore Wind Farm Project 2 Projco Limited;

“DBC” means the Dogger Bank C Offshore Wind Farm as consented The Dogger Bank Teesside A and B Offshore Wind Farm Order 2015 (as amended);

“DBC Projco” means Dogger Bank Offshore Wind Farm Project 3 Projco Limited;

“relevant DB Projco” means all or either DBA Projco, DBB Projco and/or DBC Projco as the context requires;

“relevant project” means all or either of DBA, DBB and/or DBC as the context requires;

“Wake Loss” means the total modelled impact of the reduction in AEP at a relevant project as a result of wake impacts from the authorised project;

“Wake Loss Agreement” means an agreement between the undertaker and the relevant DB Projco to address the impacts of Wake Loss caused by the authorised project in respect of the relevant project;

“Wake Loss Assessment” means an assessment of the wake loss on the relevant project by the authorised project that is commissioned and agreed between the undertaker and the relevant DB Projco pursuant to paragraph 4(1);

“Wake Loss Mitigation Scheme” means a scheme agreed between the undertaker and the relevant DB Projco, or in the absence of such agreement, determined by an independent third party expert appointed under paragraph 4, to provide mitigation in accordance with paragraph 4(2); and

“wind turbine generator” has the meaning defined at article 2(1).

3. The undertaker may enter into a Wake Loss Agreement with each relevant DB Projco in respect of its relevant project. If a Wake Loss Agreement has been entered into and remains in force with the relevant DB Projco, then paragraphs 4 to 8 of this Part of this Schedule will not apply.

4. —(1) No less than one year prior to first installation of a wind turbine generator, the undertaker and the relevant DB Projco shall agree the appointment of one or more independent third party expert(s) to undertake a Wake Loss Assessment, which shall—

- (a) take account of any design, technical or operational mitigations that have been, or that will be, implemented in the final design of the authorised project to reduce Wake Loss; and
- (b) determine the Wake Loss in respect of each relevant project.

(2) No less than six months prior to first installation of a wind turbine generator, the undertaker and the relevant DB Projco shall agree the Wake Loss Mitigation Scheme, which shall include, but not be limited to—

- (a) the mechanism for quantifying the financial loss caused to each relevant project as a consequence of the Wake Loss identified in the Wake Loss Assessment;
- (b) the financial loss per annum caused to each relevant project; and
- (c) the payment mechanism and timescales for mitigating such financial loss.

(3) In the absence of agreement under sub-paragraph (2), the undertaker and the relevant DB Projco shall agree the appointment of an independent third party expert to approve or determine such Wake Loss Mitigation Scheme. That expert shall not approve or determine such Wake Loss Mitigation Scheme without first consulting

with the relevant DB Projco and taking into account any written representations made by the relevant DB Projco provided that any written representations are provided to that expert by the relevant DB Projco within 40 working days.

5. The Wake Loss Mitigation Scheme must be implemented as approved for the lifetime of the authorised project.

6. In the event that a relevant project ceases to be operational earlier than accounted for in the Wake Loss Assessment and the Wake Loss Mitigation Scheme, the obligation under paragraph 5 in respect of that relevant project shall no longer be in effect.

7. —(1) The undertaker must not commence installation of any wind turbine generator unless a guarantee or alternative form of security in respect of the total liabilities of the undertaker under the Wake Loss Mitigation Scheme is in place.

(2) The form of guarantee or security referred to sub-paragraph (1), and the amount guaranteed or secured, must be approved by the relevant DB Projco (such approval not to be unreasonably withheld) and deposited with the Secretary of State.

(3) A guarantee or other security in accordance with this paragraph 7 that guarantees or secures the undertaker's payment to mitigate the effects of Wake Loss in accordance with the relevant Wake Loss Mitigation Scheme is to be treated as enforceable against the guarantor or provider of security by any person to whom such mitigation is properly payable and must be in such a form as to be capable of enforcement by such a person.

8. Paragraphs 4 to 7 of this Part of this Schedule shall cease to have effect if a national scheme for assessment and compensation of Wake Loss effects prescribing a scale for calculation of Wake Loss impacts and a mechanism for the payment of any compensation and/or mitigation caused by such Wake Loss impacts has legal effect provided that—

- (a) the authorised project and the relevant project are within the scope of the relevant national scheme;
- (b) the undertaker has complied with the requirements of the relevant national scheme; and
- (c) the undertaker and the relevant DB Projco, following review of any such national scheme and acting reasonably, agree to paragraphs 4 to 7 ceasing to have effect.

9. Any difference under the provisions of this Part of this Schedule must be, unless otherwise agreed in writing between the undertaker and the relevant DB Projco, determined by arbitration in accordance with article 47 (arbitration).