

Outer Dowsing Offshore Wind

Equinor's comments on 21.9 Wake Loss Technical Note

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Outer Dowsing Offshore Wind Examination submission Equinor's comments on 21.9 Wake Loss Technical Note		
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Table of Contents

1	Introduction	6
2	Wake Effects	7
2.1	Comments on the Wake Loss Technical Note	7
2.2	Comments on Orsted IPs' Responses to ExQ1	7
3	Conclusion	8
	References	9

Table of Figures

Figure 1 – The Project Array area, DEP Array area and SEP Array area

Glossary of Acronyms

DCO	Development Consent Order
DEL	Dudgeon Extension Limited
DEP	Dudgeon Offshore Wind Farm Extension Project
SEL	Scira Extension Limited
SEP	Sheringham Shoal Offshore Wind Farm Extension Project
SoS	Secretary of State for Energy Security and Net Zero
WTG	Wind Turbine Generators

Glossary of Terms

The Applicant	GT R4 Ltd. The Applicant making the application for a DCO. The Applicant is GT R4 Limited (a joint venture between Corio Generation (and its affiliates), Total Energies and Gulf Energy Development (GULF)), trading as Outer Dowsing Offshore Wind. The Project is being developed by Corio Generation, TotalEnergies and GULF.
DEP Array area	The area offshore within which the DEP wind turbine generators (WTG), offshore substation, and infield, interlink and export cables will be positioned.
Dudgeon Offshore Wind Farm Extension Project (DEP)	The Dudgeon Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.
Equinor	Equinor New Energy Limited acting on behalf of Scira Extension Limited (SEL) and Dudgeon Extension Limited (DEL)
Orsted IPs	Hornsea 1 Limited, the collective of Breesea Limited, Soundmark Wind Limited, Sonningmay Limited and Optimus Wind Limited (together, the "Hornsea 2 Companies"), Orsted Hornsea Project Three (UK) Limited, Orsted Hornsea Project Four Limited, Lincs Wind Farm Limited, Westernmost Rough Limited and Race Bank Wind Farm Limited, together or in any combination.
The Project	Outer Dowsing Offshore Wind, an offshore wind generating station together with associated onshore and offshore infrastructure.
Project Array area	The area offshore within which the Project's generating station (including wind turbine generators (WTG) and inter array cables), offshore accommodation platforms, offshore transformer substations and associated cabling will be positioned.
SEP and DEP Order	Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024.
SEP Array area	The area offshore within which the SEP wind turbine generators (WTG), offshore substation, and infield, interlink and export cables will be positioned.
Sheringham Shoal Offshore Wind Farm Extension Project (SEP)	The Sheringham Shoal Offshore Wind Farm Extension onshore and offshore sites including all onshore and offshore infrastructure.

1 Introduction

1. GT R4 Limited (trading as Outer Dowsing Offshore Wind) ("The Applicant") has made an application for development consent for the construction and operation of the Outer Dowsing Offshore Wind project ("the Project").
2. Equinor New Energy Limited ("Equinor") is lead developer for the Sheringham Shoal Extension Project (SEP) and the Dudgeon Extension Project (DEP) on behalf of Scira Extension Limited (SEL) and Dudgeon Extension Limited (DEL) and has submitted a relevant representation on behalf of SEL and DEL.
3. The distance between the DEP Array area and the Project Array area is 13.3 km. The distance between the SEP Array area and the Project Array area is 25.8 km. The separation between the Project Array area, the SEP Array area and the DEP Array area is illustrated in Figure 1.

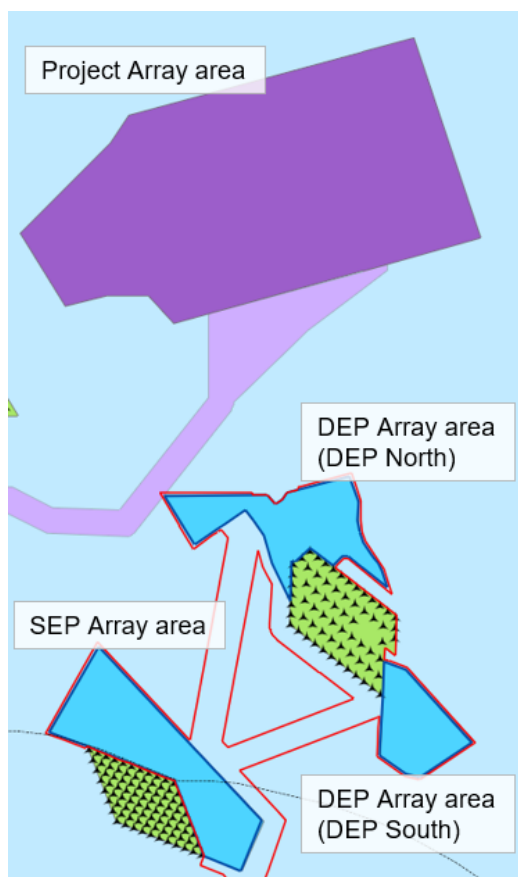


Figure 1 – The Project Array area, DEP Array area and SEP Array area

4. As the owners of SEP and DEP, SEL and DEL are the named undertakers that have the benefit of the Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024 ("the SEP and DEP Order"), consent for which was granted by the Secretary of State (SoS) for Energy Security and Net Zero on 17 April 2024 and which came into force on 09 May 2024.
5. SEL and DEL hold generation licences under the Electricity Act 1989.

6. Equinor has been in discussions with the Applicant on a number of topics both pre-application and post-application, including with regards to issues relating to the proximity of the respective projects and to the sharing of information in relation to HRA derogation proposals, as referenced in Equinor's relevant representation.
7. Equinor continues to progress discussions with the Applicant with respect to a cooperation and proximity agreement in relation to the proximity of the Outer Dowsing Offshore Wind project to the Sheringham Shoal Extension Project (SEP) and the Dudgeon Extension Project (DEP).

2 Wake Effects

8. The Applicant submitted an assessment of the impacts of the Project as a result of wake effects on other offshore windfarm developments close to the proposed order limits of the Project at Deadline 4, 21.9 **Wake Loss Technical Note** [REP4-114]. The **Wake Loss Technical Note** [REP4-114] makes reference to the predicted impacts on the energy yield of SEP and DEP as a result of wake effects caused by the Project.
9. Following the publication of the **Wake Loss Technical Note** [REP4-114] at Deadline 4, Equinor entered into discussions with the Applicant on the issue of wake effects on 25 February 2025.
10. Equinor wishes to highlight its interest in the SEP and DEP projects in relation to the issue of wake effects, and to raise concerns with respect to the potential impacts on the energy yields of the SEP and DEP projects as assessed in the **Wake Loss Technical Note** [REP4-114] Table 4-1.
11. This document presents Equinor's initial comments on the **Wake Loss Technical Note** [REP4-114] and on related examination documents on the topic of wake loss submitted by the Applicant, Orsted IPs and The Crown Estate.

2.1 Comments on the Wake Loss Technical Note

2.1.1 Wake Loss Assessment

12. Equinor notes that the impacts on SEP and DEP as a result of wake effects have been assessed by the Applicant in Table 4-1 of the Wake Loss Technical Note.
13. In continuing discussions with the Applicant, Equinor will seek to fully understand the details of the assessment methodologies, the assumptions made and whether the assessment represents the worst case scenario for impacts on SEP and DEP.

2.2 Comments on Orsted IPs' Responses to ExQ1

14. Equinor has reviewed Ørsted IPs' response to written question Q1 OG 1.2 in **Responses to ExQ1**, [REP2-076] submitted at Deadline 2.
15. Equinor agrees with Ørsted IPs' statement that there is sufficient evidence of material farm-to-farm wake effects at the separation distances relevant to the projects being considered in the **Wake Loss Technical Note** [REP4-114], including those with separation distances greater than those considered in the Frazer-Nash

Consultancy Array Layout Yield Study, as referenced in The Crown Estate's **Responses to ExQ1**, [REP2-080] and including both SEP and DEP.

16. Equinor agrees with the technical description provided in Ørsted IPs' response to written question Q1 OG 1.2 and considers that Ørsted IPs have provided an authoritative summary of the evidence available for long-range wakes.

3 Conclusion

17. Equinor considers that the assessment presented in the **Wake Loss Technical Note** [REP4-114] demonstrates significant impacts on the energy yield of SEP and DEP.
18. Equinor will continue to engage with the Applicant to discuss this impact and reserves the right to make further representations on this topic. Equinor will update the Examining Authority in relation to progress in its discussions with the Applicant.

References

Wake Loss Technical Note, Outer Dowsing Offshore Wind, 2025, REP4-114
Array Layout Yield Study, Frazer-Nash Consultancy, 2023
Responses to ExQ1, The Crown Estate, 2025, REP2-080
Responses to ExQ1, Orsted, 2025, REP2-076
The Sheringham Shoal and Dudgeon Extensions Offshore Wind Farm Order 2024, Statutory Instrument 2024 No.564