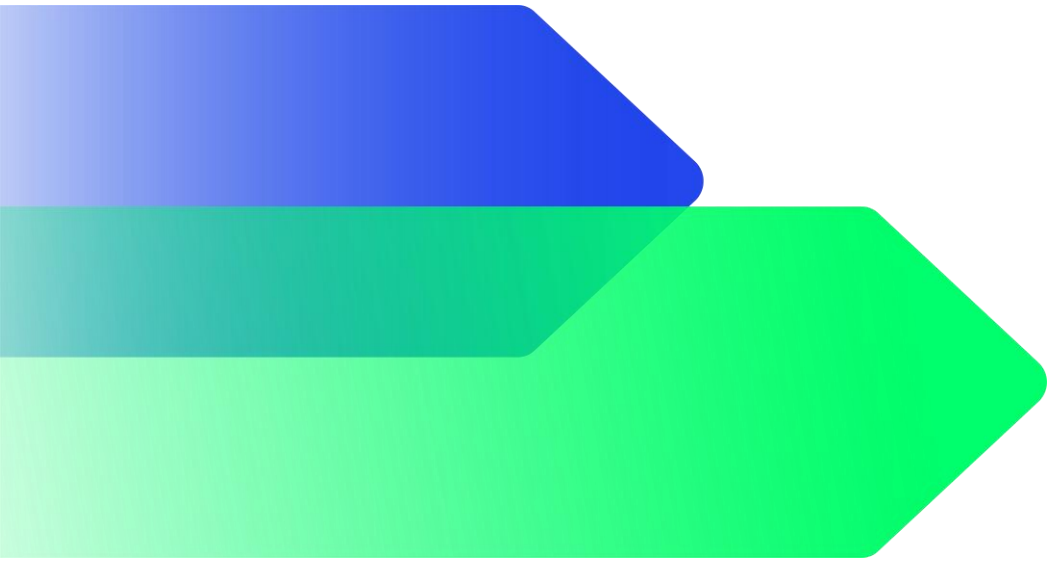
CARBON TRUST

OFFSHORE WIND ACCELERATOR S4Y6

# Clarification Question Responses

TWG-Y – Improved Turbulence Estimate valuation (ITE)

**3 June 2025**



| # | Type | Question | Response |
|---|---|---|---|
| **1** | Project specific | Section 2.2 - “Novel methods of estimating free stream turbulence” - could this include LES modelling? | The primary focus is on novel measurement methods, especially floating lidar and dual scanning lidar. However, modelling methods (including LES) are also of interest. |
| **2** | Project specific | WP2 - reference made to assumptions being made that are representative of Northern European sites. Is the intention to limit the study to N Europe or is there an interest in extending the scope to consider other regions under different atmospheric conditions? | The primary focus should be Northern Europe. However, if budget allows then it would be beneficial to extend this to other regions, including Japan. |
| **3** | Project specific | The previous study references focussed on jacket foundations. For the fixed bottom scenario, is the intention to limit the scope to jacket FOU again? Noting that generally jackets are found to be more sensitive to TI than monopiles. | The intention is to consider both monopiles and jacket foundations. Any difference in TI sensitivity between these fixed foundation types would be an interesting finding. |
| **4** | Generic | Can you please share the reports from the two prior studies referenced in the description? | These can only be shared with the successful candidate under NDA. The names of the reports can be provided.<br><br>From the Floating Lidar Turbulence Intensity project;<br><br>• WP1 “D01: Report highlighting the findings from the literature review” (23/04/2023)<br>• WP4 “D06: Technical note of KPIs and validation criteria recommendations” (18/02/2024)<br>• Additional WP “Technical Note - Update on publications on approach to FLS TI” (05/02/2025)<br><br>And from the Impact of Turbulence on Fatigue project: |

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| | | | • Work package 3 report" (160067-UKBR-R-01, Rev. B 27/02/2015) |
| **5** | Project Specific | There are many competing prototypes for floating turbines/foundations. Are you happy for us to pick one we think most suitable? If not, can you offer guidance regarding your preferences? | The prototype must be a semi-sub but we're open to the bidders' suggestions. The contractor should also be aware the OWA are also looking to secure IP right to generic floating foundation concept designs for this project but may not be successful, hence why we'd prefer options put forward in the bids. |
| **6** | Project Specific | How much detail are you expecting on the structural analysis on the floater? TI is mainly going to influence fatigue loads, and fatigue analysis of floaters is at a really early stage so this might be challenging to do within budget. | Not exceptionally detailed, i.e. what the budget should allow. We're looking to get a bearing on TI as a design driver and whether this is worth investigating further in the floating space. |
| **7** | Project Specific | Is an understanding of the cost impact on drivetrain components expected? It will be challenging to deliver an optimisation of drivetrain components within budget using a conventional design approach, and simplified scaling law approaches to component mass do not account for loads. We would aim to understand cost impact on blades, tower and foundation - would this be acceptable? | This would be acceptable. |
| **8** | Project Specific | The description mentions monopiles, jackets and semi-subs, but not which design or material (concrete?) - can you please advise? | We're open to the bidder's suggestion on this. This is a developer led project so please to bear that in mind i.e. 'what would provide most value to developers?' should be at the forefront of the decision making. |
| **9** | Project Specific | Would you like us to assess the impact of turbulence on O&M, or rather, just the impact on turbine/foundation design? | Please focus on design. |

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| **10** | Generic | Is there an expected distribution of budget over the different Work Packages, and if so, what is it? | There isn't a preference, but we'd expect the modelling WP to be weighted the heaviest with regards to budget. A suggestion but by no means a criterion: WP1 - 15% WP2- 50% WP3- 15% WP4- 20% |

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