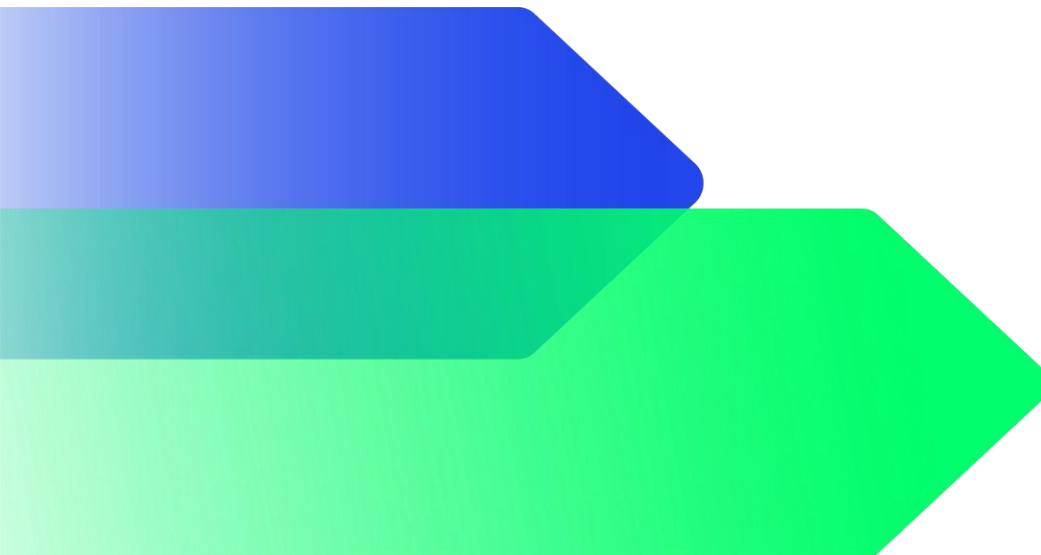


FLOATING WIND JOINT INDUSTRY PROGRAMME S3P3

Clarification Question Responses

Floater and Tower Designs for Larger WTG's (FTDL)

February 2025



#	Type	Question	Response
1	Project specific	The tender document gives example of floating foundation classification types (semi-sub, barge and spar). Is the Carbon Trust also interested in TLPs in this study? As the methodology may differ between foundation types, could the Carbon Trust indicate their hierarchy in preferred foundation types to be analysed.	TLP is part of the reference designs which would be shared with the appointed contractor, see response to question 13. At this stage there is no preferred hierarchy of foundation types and would likely be confirmed with the FLWJIP partners as part of the project kick off with the appointed contractor.
2	Project specific	In the main objectives (Section 2.3), only taut vs semi-taut mooring systems are shown, can catenary mooring arrangements also be studied?	The list is not exhaustive, and bidders are encouraged to factor in any additional parameters they feel would be beneficial to the project.
3	Project specific	Section 2.3: There is no mention of the turbine controller in the parameter list, should it be considered as an input associated with the turbine choice?	See response to question 2.
4	Project specific	Section 2.3: Is the listed parameter array an exhaustive list of the possibilities or can it be expanded (e.g. 22MW turbines, etc)?	See response to question 2.
5	Project specific	<p>WP1 - What is the objective of the sensitivity analysis mentioned in this work package? Is it to understand which parameters of the beam model significantly affect the level of agreement between the reference FE coupled frequency and the one predicted by the beam model?</p> <p>Our experience is that the beam model is often calibrated to the FE model.</p>	The FLWJIP partners are open to whichever analysis methodology the bidder will propose. The sensitivity analysis between a beam and a full FE model is proposed to demonstrate and validate the application of the structural models the bidder is likely to apply in the modelling and analysis WPs.

6	Project specific	WP2 - In the ITT it is mentioned that sites in the Mediterranean and the North Sea are to be investigated. Is the expectation that one site of each of these two locations is selected? Can other sites be targeted? Is there an expectation regarding the number of sites to be investigated?	See response to question 2.
7	Project specific	WP2 - Is the expectation for this stage that a single floater design is used to explore the design space? If so, are semi-submersibles the foundation archetype to be targeted? Do you expect other floater archetypes to be investigated at this stage?	It would be dependent upon results of WP1 as to the number of floater designs to be used to explore the design space.
8	Project specific	WP3-Similar to previous question, does "concepts defined in WP2" refer to foundation archetypes? Or more generally to concepts that explore the entire design space?	This refers to concepts that explore the entire design space to reflect different turbine/floater configurations.
9	Project specific	WP4 -Is the expectation for this work package that some of the designs investigated previously are modelled in more detail? Or instead that alternative designs that have not been considered in previous work packages are investigated as part of this one	The three to four configurations would be based upon more detailed modelling of concepts already investigated in more detail.
10	Project specific	WP4-Is fatigue assessment focussed on the tower in this work package? Is fatigue assessment of the floater expected?	This would be focused upon both the tower and floater but the FLWJIP partners are open to bidders proposing a suitable approach should they wish to focus only on one.
11	General	Can this JIP project be undertaken by a consortium which has an academic partner ? If yes, is there max allowable percentage for the academic partner?	The project can be delivered by a consortium which includes an academic partner. With respect to the number of partners there would need to be clear justification as to what each consortium member is bringing to the project. We would envisage that consortiums should not exceed a total of 3 organisations.

<p>12 Project Specific</p>	<p>WP1 - please can Carbon Trust confirm if the request to 'Undertake a sensitivity analysis of the floater eigenfrequencies between an equivalent beam model and a full Finite Element (FE) model, with specific focus upon stiffened panel floater designs' is to perform an analytical assessment or to explore the differences between the two approaches as part of the literature review?</p>	<p>See response to question 5.</p>
<p>13 General</p>	<p>Please can Carbon Trust confirm the contents of the Floating Wind JIP 15MW reference turbine files?</p>	<p>The four Reference Designs were developed for use in FLW JIP projects. The four designs are:</p> <ul style="list-style-type: none"> - TLP - Spar - Semi Sub - Barge - Metocean Conditions for Benign, Moderate and Harsh sites (a PDF document and Excel file for each would be shared). Model Files are in OrcaFlex and OpenFAST for each reference design.
<p>14 Project Specific</p>	<p>WP2 - can Carbon Trust confirm if details for turbines larger than 15MW (i.e. 20MW and 25MW) will be shared as part of the scope or are consultants expected to develop parameters for these based on experience?</p>	<p>No further details would be shared regarding larger turbines larger than 15 MW.</p>
<p>15 Project Specific</p>	<p>WP3 - please can Carbon Trust confirm the number of turbine/floater configurations that they wish to be assessed? Or are Consultants free to propose a number they feel is appropriate?</p>	<p>Bidders are invited to propose an appropriate number, but they should demonstrate the range of configurations is sufficiently wide to appropriately cover the design space and investigate relevant design trends and variables.</p>

16	Project Specific	Section 2.3 - Consultant notes the TLPs are not mentioned in the list of parameters or in the description of the work packages, please can Carbon Trust confirm if this is intentional or if they wish for TLPs to be considered as part of the study?	See response to question 2.
17	Project Specific	Section 2.3 - Can Carbon Trust confirm if the list of parameters is fixed or is this expected to change ahead of/during the study?	See response to question 2.
18	Project Specific	WP4 - Can Carbon Trust confirm if as part of the requested coupled analysis, whether the fatigue implications assessment should concern the tower only or the whole floating structure (tower and floater)?	The fatigue assessment should be focussed on the tower and the interface with the floating structure, hence elements of the floating structures which affect the frequency response should be included in the fatigue assessment.
19	Project Specific	WP5 - Can Carbon Trust confirm which cost components should be considered as part of the cost estimation? Is it expected to be full life-cycle costs?	Full life cycle costs.

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