

Floating Wind JIP ITT documents - Clarification Questions and Responses

1	General ITT question	Assigned weighting for each work package.	It is assumed that the weighting for each work package (Literature Review and Scoping Study) will be equal, with an allowance for work package A&B: <ul style="list-style-type: none"> • 40% WP1 • 40% WP2 • 10% WPA&B
2	General ITT question	Delivery of WPA&B	WPA&B relate to the project management and expenses for each individual study. For this ITT WPA&B will relate to Phase I. Project management and expenses for Phase II should be considered within the scoping study (WP2) of Phase I.
3	General ITT question	Will reference/standard platforms be provided for the purposes of the study?	It is expected that coupled platform and turbine models (spar, semi-submersible and TLP) will be provided by the Floating Wind JIP for Phase 2 of the four studies.
4	General ITT question	Are all the sample platform/turbine models in the same format e.g. OrcaFlex?	It is expected that coupled platform and turbine models will be in a standard format.
5	General ITT question	Will the study be required to consider more than one type/variation of each platform category	It is expected that each study will focus on one platform for each typology (spar, semi-submersible and TLP)
6	General ITT question	How many turbine variations and model will be required for each platform (e.g. 10MW, 12MW, 15MW)?	Current Phase 3 Floating JIP studies are considering a 15 MW reference turbine. It is expected that these studies will consider a 15 MW and potentially an 18 MW reference turbine (models to be supplied).
7	General ITT question	Metocean data and site selection	It is expected that outline metocean data for specific sites (as identified in previous Floating Wind JIP studies) will be provided for of each study
8	General ITT question	Can a consortium consist of EU based partners	Yes, there are no issues with a consortium including EU partners or other partners from outside the UK
9	General ITT question	Previous JIP studies that may be available upon request	Previous FLW-JIP studies have focussed on: Policy & Regulation; cost sensitivity; Logistics, Electrical Systems; Mooring Systems; Turbine Scaling; Dynamic Export Cables; Heavy Lift Maintenance; Monitoring and Inspection; Tow to Port Systems; Mooring in challenging environments
10	General ITT question	Is a cost breakdown for Phase 2 expected in the ITT response / please clarify the level of detail that is expected in the ITT response to address Phase 2	WP2 of Phase I (this ITT) is the undertaking of a scoping study for Phase II. It is expected that detailed costings for Phase II will be identified as part of this work package, but an indication as to the WP2 methodology would be expected in the Phase I ITT response.



<p>11</p>	<p>General ITT question</p>	<p>It is noted that monthly meetings in the Carbon Trust offices are likely to be expected. Please confirm this is applicable to both phases of the works. Please confirm if attendance at the Floating Wind JIP Partner meetings will be in addition to the monthly meetings at the Carbon Trust offices. Please also give some detail as to how regular these meetings take place</p>	<p>It is anticipated that fortnightly meetings will be held (over skype/phone) between the contractor and Carbon Trust to update on project progress.</p> <p>The contractor will be expected to present on project progress and/or upon completing deliverables at FLW-JIP partner meetings. These are typically held every two months at Carbon Trust offices in London. Contractors can dial in/skype in to these meetings, but will typically be expected to present in person for project kick off, major deliverable updates, and project close.</p>
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1	Accessibility & Availability ITT	Will the study include industry guidelines on the provision for emergency escape equipment?	Although not stated in the ITT, bidders are encouraged to suggest additional material for the study. It should be noted however it is not the intention of this study to generate industry guidelines.
2	Accessibility & Availability ITT	Is major unscheduled maintenance also part of the scope of the study?	Unscheduled maintenance such as requiring the interventional of a heavy lift vessel is considered in the Floating Wind JIP Phase 3 study: Heavy Lift Maintenance and as such not within the scope of this study.
3	Accessibility & Availability ITT	Should other environmental and operational limits for maintenance activities performed manually or tool-aided, by technicians, (such as blade inspection and repair) also be evaluated and included?	The purpose of this study is to evaluate the effect of floater motion on human factors. The main focus is on access to the floater platform and work at nacelle level. Work outside this scope, such as rope access is not considered as part of this study.
4	Accessibility & Availability ITT	Will full-scale motion data be provided to the contractor for developing the accessibility study?	It is expected that coupled platform and turbine models (spar, semi-submersible and TLP) will be provided by the Floating Wind JIP for Phase 2 of the study. Bidders are encouraged to outline how they plan to utilize these models in conjunction with any site specific met-ocean data or suggested sites.
5	Accessibility & Availability ITT	How many different sites will be required for study for each platform type	It is expected that at least two sites will be proposed per platform type (one deep water ocean condition and one shallower water constrained water body condition) but bidders are encouraged to suggest alternatives if deemed beneficial.

1	Floating Yield Study ITT	Would any insights from the JIP partners be provided for the Phase 1 that can be included in the literature review and can be used for scoping of Phase 2 apart from publicly available information and publications	Contractors can request access from the FLW-JIP partners to see previously produced reports from the programme, and quite possibly from the OWA programme. Contractors should not be reliant on gaining access to any previous FLW-JIP documents. Partners are most unlikely to provide any access to their in-house research.
2	Floating Yield Study ITT	For the Phase 2, will validation be limited to single or multiple technologies (different WTG types/floating platforms)?	Attention should be paid to different platform types, it is expected the contractor will validate typical leading platform technologies (e.g. Spar, semi-sub and TLP). Other considerations to mooring types to may be pertinent.
3	Floating Yield Study ITT	Will support in terms of access to operational assets be provided by the JIP partners, for example, if the measurement campaign is proposed will contractor be able to complete measurements on the operational assets and would access to Scada data be provided?	It is not expected that partners will grant access to operational assets, and measurement campaigns are not anticipated to feature in the scope of this project. Operational data for some sites has been made public, for example Equinor/ORE Catapults POD datasets.
4	Floating Yield Study ITT	Are items D04 to D07 expected to form part of the deliverable of Phase 1 or as part of the larger Phase 2 studies?	D04 through D07 are expected to be included in both phases of the work.
5	Floating Yield Study ITT	The RFP refers “to leading software” in different sections, also quoted below. Can you please clarify whether Ansys WindModeller is meant with “leading software”? Alternatively, can you specify the requirements of “leading software for prediction of floating wind yield”	There is no preferred software package to be used, the term leading software is intended to mean software packages commonly used throughout industry and can be used/is already used by the JIP partners.
6	Floating Yield Study ITT	There are various live research topics that may influence the outcome, for example, moorings and station keeping solutions in water depths greater than currently represented by industry experience, but which may be anticipated in the near- to mid-term. Where open questions still exist, how best would you like this reflected in the proposed approach?	Contractors will be expected to use the most current, up to date research and data. New research that is expected to be available soon that would influence the work should be noted as potential future areas of study and inclusion for FLW-JIP work.
7		The ITT suggests that the computer-aided engineering tools for simulating the dynamic response of a floating offshore WTG will be supplied to provide consistency across the projects being delivered in the Floating Wind JIP. Can the Carbon Trust provide additional detail as to what models have been used to date?	To date OrcaFlex has been the primary model used, but other commercially available, widely used models are accepted within project proposals.
8	Floating Yield Study ITT	May the review and scoping exercise go beyond simple codification of what is already common practice to examine possible improvements that may be achieved by considering the	This is an acceptable approach; however, it should be made clear that the primary objective of phase 1 is a literature review that benefits the needs of the partners in their drive to commercialise floating wind.

		floating energy yield procedure to be something of a tabula rasa? So, for example, how the procedure may be developed as an API that supports integration of the energy yield into other phases of project delivery and other project activities in a dynamic manner? That is, the preparation of an energy yield that can be treated as a living document that is revised as additional information becomes available during project delivery, and the preparation of an energy yield that interfaces more easily with other areas of the project such as, for example, storage, or co-location with other marine renewables, such as wave or floating tidal?	
9	Floating Yield Study ITT	What are anticipated to be the data sources that fulfil the data requirements articulated by the energy yield procedures? Should we consider accommodation of floating lidar, synthetic aperture radar, operational information from adjacent projects, etc?	It is anticipated that contractors take advantage of publicly available datasets and sources. FLW-JIP partners at their discretion may be able to provide data on request and under NDA, this should not be assumed to be a given as part of the project proposal however.
10	Floating Yield Study ITT	For the AEP and sensitivities to be investigated as part of Phase 2, will the Carbon Trust indicate the specifics of the preferred project size, location, mooring type and substructure or will this be at the discretion of the Contractor?	Typical design cases can be suggested by the contractor but should follow the advice / approval of the FLW-JIP partners. Typical designs are likely to include: deep/shallow; Harsh/mild metocean conditions; TLP/spar/semi-sub;/ catenary/semi-taut/vertical moorings.

1	Numerical Modelling & Guidelines ITT	Does the JIP have any preference for specific software tools or types of software tools? OrcaFlex is the only tool mentioned by name. Are other types of models such as FEA and CFD of interest?	Other types of commercially available models may be used, it is advised that models commonly used across the industry are proposed, such that partners can readily access results and outputs.
2	Numerical Modelling & Guidelines ITT	Regarding floater types, do we agree on 4 types: barges, semi-subs, TLP, spars. Or it's up to each bidder to define how many types they want to go for?	It is expected that contractors will analyse three main floater types: spar, TLP, semi-sub.
3	Numerical Modelling & Guidelines ITT	Does the JIP have any preference for specific software tools or types of software tools? OrcaFlex is the only tool mentioned by name. Are other types of models such as FEA and CFD of interest?	There is no specific software that contractors are expected to use, software should be commercially available and used widely throughout the industry.
4	Numerical Modelling & Guidelines ITT	Regarding improvements, what is it we should compare with to see things that have improved? (for example, do we compare what we have now with what we had in 2015?)	The purpose of the study is to improve harmony between rules, guidelines and standards. Comparison should be drawn with existing and proposed rules, guidelines and standards.
5	Numerical Modelling & Guidelines ITT	For "rules, guidelines and standards", do have an agreement on what we will look into or it's up to each bidder to decide the documents that they will cover? Or this should be the results from Phase A?	It is expected that literature review of phase I will help to identify the documents that are to be covered.
6	Numerical Modelling & Guidelines ITT	Regarding selecting and running tools, do you mean comparing hydrodynamic software like AQWA/WADAM/MOSES or more generic such as: for a certain load case, we should use a hydrodynamic software package (and the reader will decide the software package they prefer)?	The purpose of the study is to aid comparison between load cases rather than specific software.
7	Numerical Modelling & Guidelines ITT	I've seen in the past where people work on the same model using a different software, compare the results and write recommendations. Is this something you want to achieve?	Although not included in the initial scope of work any additions proposed by the bidder that aid or enhance the study will be received favourably.