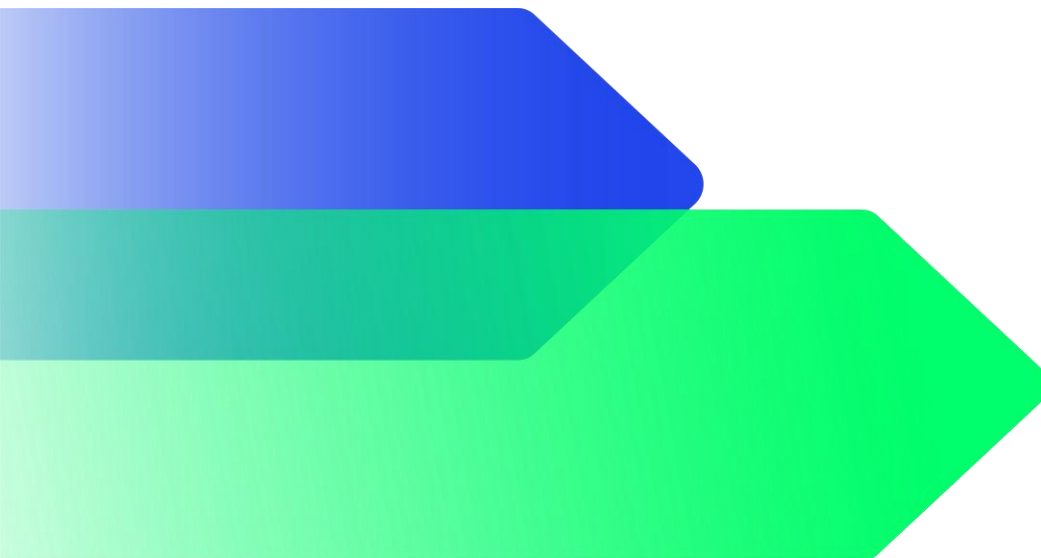


OFFSHORE WIND ACCELERATOR S4Y6

Clarification Question Responses

TWG-L – HAZID and HAZOP for SOV Offshore Charging (SHAZ)

24 September



#	Type	Question	Response
1	Project specific	Are the Carbon Trust able to provide the details of those 6 as we have knowledge of around 8 in various stages of maturity and are sure there are more, would it be more useful for this to be in the main body of work than an optional extra as they are the specialists in their particular hazard?	Six was proposed based upon those that the OWA partners are familiar with. There may be more but this has been split out as optional work from a project budget perspective. The OWA partners would like to initially focus on general risks associated to offshore charging. Should there be interest from the OWA to undertake further analysis of specific offshore charging innovators, this can be picked up during the project.
2	Project specific	Are there any specific rules/requirements/guidelines/ISO?	We would see it that bidders propose what they deem to be relevant from a standards/guidelines perspective.
3	Project specific	Stakeholders are fundamental part of risk assessments. Additionally, stakeholders must be willing to share information/documentation/drawings/procedures. How do we ensure beforehand that sufficient stakeholders and documentation are part of the study? In the description of the tender, this seems to be defined only at WP2.	It is expected that the bidders would have sufficient relevant contacts to support engagement for the project. It is at the discretion of the respective bidder, but they could look to engage certain stakeholders as part of the bid writing process and we would also welcome bids from consortiums.
4	Generic	What is the expected timeframe for the study? Does this need to be defined by the Contractor at tender phase? Normally with many stakeholders we expect that planning is done as part of the WP1	The project is expected to have a duration of 6-8 months.
5	Generic	Please can Carbon Trust clarify if the expectation is for the contractor to include the coverage of costs for all attendees time within their own proposal costing or if the Carbon Trust intend to allocate attendees from the working group and wider known contacts or request attendance without charge	Carbon Trust and the OWA partners may be able to provide some contacts, but the expectation is that the bidders will have relevant industry contacts to support the delivery of the project. We are open to bids being submitted by small consortiums but we don't

			foresee attendees to the workshop being paid to input to the project.
6	Project specific	What is the intended power output of the charging system, and will it be an AC, DC or a combination of both?	AC is expected to be the output used for SOVs.
7	Project specific	Information on the method of getting the cable from the turbine to the vessel.	Set parameters have not been outlined at this stage for this piece of work, this is mainly due to some unknowns from industry. Should bidders wish to outline and propose parameters that they feel are accurate and relevant to support their delivery of the project then we are open to this. However, the project has intentionally been kept at a more generic level to understand the overarching risks related to offshore charging for SOV's at this stage.
8	Project specific	Will new equipment be deployed both on the turbine and vessel to support charging, i.e. AC/DC inverter.	
9	Project specific	How manual is the process of attaching the charging cable to the vessel, i.e. do crew need to pull cables across the deck to a charge point.	
10	Project specific	Which system will have primary control of the charging, the turbine power systems or the vessel control system	
11	Project specific	Is there adequate firefighting measures onboard the vessel to suppress a lithium-ion fire, same for the turbine, salt water not ideal due to conductivity.	
12	Project specific	How will grounding of the two systems be achieved and monitored.	
13	Project specific	Is there an expectation that the workshop should include a formal HAZOP session?	Happy for bidders to propose a revised approach and if they feel that the HAZOP is not relevant then demonstrate how this would be captured entirely as part of the HAZID.

14	Project specific	Does the workshop need to be a single session for all stakeholders, or is it possible to run multiple sessions if there are many stakeholders who sign up to attend?	Happy for bidders to propose an alternative approach to how best to ensure sufficient engagement is obtained and that all relevant stakeholders are engaged. We do, however, feel that it would be better to have this take place in person and ideally with relevant parties at the same time, but are mindful of the balance required in context to wider engagement.
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Published in the UK: 2025