

| Question No. | Question | Response |
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| 1 | WP5: Will OWA provide a contact list of WTG manufacturer or available data on WTG? | The OWA members should be able to provide some contact details of relevant stakeholders but the Contractor should not rely on the OWA for these contacts. |
| 2 | WP5: Is academic work of interest in this task? | Yes, if relevant. |
| 3 | WP1: “It’s also expected that the information held by OWF operators (OWA members) is not at the level of granularity required for this study.” – Does this refer to “SPARTA” data? The implication is that this project will provide more detailed breakdown on actual power convertor failures. Will OWA members release any anonymized operational data or other more detailed data from SPARTA to support this project? | <p>This project hopes to go into individual component level detail and we will not receive this from SPARTA. We hope to provide the Contractor with SPARTA data on forced outages and turbine performance and that the below metrics will be shared;</p> <ul style="list-style-type: none"> • Number of Forced Outages • Number of Forced Outages per turbine • Downtime due to Forced Outages • Downtime due to Forced Outages per turbine • Lost Production due to Forced Outages • Lost Production due to Forced Outages per MW • Production Based Availability - Wind Farm System • Capacity Factor <p>OWA members may be able to provide more specific failure data but we cannot guarantee this. The Contractor is expected to engage with a range of stakeholders to receive as much detailed information as possible.</p> |
| 4 | WP1: Will OWA members support industry engagement by providing introductions to key contacts in supply chain for convertors (eg. ABB, KK Systems) and wind farm technical asset managers and O&M technical leads? This could be by means of an open letter / | The OWA members will be able to provide some contact details of relevant stakeholders but the Contractor should not rely on the OWA for these contacts. |

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| | statement agreed by OWA members to open the door to conversations with relevant industry contacts. | We are also happy to provide a letter of support detailing the project and our collaboration with the appointed Contractor. |
| 5 | WP3: As in WP1, key to this analysis will be honest and open sharing of failure data and fault analysis by convertor manufacturers. Will the OWA members provide support by open letter or similar means? | Yes, the OWA can provide a letter of support detailing the project and our collaboration with the appointed Contractor. |
| 6 | WP2: Does the OWA TWG have access to component suppliers who can provide input into the project? | The OWA members should be able to provide some contact details of relevant stakeholders but the Contractor should not rely on the OWA for these contacts. |
| 7 | WP2: Will the OWA assist in delivery via the provision of background information for specific turbine failures i.e. operating conditions when failure occurred (SCADA data etc.) , manufacturer failure reports, component samples for failure mode analysis, etc., as part of the WP2 work? | In addition to the SPARTA data listed above, OWA members may be able to provide specific failure data but we cannot guarantee this. The Contractor is expected to engage with a range of stakeholders to receive as much detailed information as possible. |
| 8 | WP3: Is there scope for the design improvements to be validated by the OWA TWG members? | Yes. |
| 9 | WP3: Is the intention for the design review to be carried out generically or against specific OEM of the power converters? | Generically but considering existing offerings of OEMs. |
| 10 | WP3: To enable the identification of data provision, will the TWG members identify the signals already available within their wind farms on the power convertors? | The expectation is that the Contractor would already have an understanding of these but the OWA members should be able to provide further details. |

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| 11 | WP4: Will the existing O&M strategies (suitably anonymised) be provided by the TWG members? | The OWA members should be able to provide information regarding their existing O&M strategies but the Contractor should not rely on the OWA solely for this information. |
| 12 | WP5: - Section 4.9 in the Tender states that "The Scope of Work includes one Optional Work Package." WP5 states that TWG-E will decide whether to execute a practical demonstration of technology for real-time monitoring of power converters. Can you please clarify which part of the scope of work is considered optional? | There was a small mistake in the initial ITT, there are no optional work packages. |
| 13 | WP5: Is the optional work package to be included as part of the main budget or should it be listed as additional work with a separate budget? | There was a mistake in the initial ITT, there are no optional work packages. |
| 14 | WP5: "It will be at the discretion of the TWG-E whether or not a practical demonstration is supported by this project." Is the organisation of this practical demonstration within the package workscope? | No. WP5 only includes the specification of the potential demonstration project. |
| 15 | What are the requirements of the demonstration? Those of WTG converter equipped with a monitoring system itself or system capable to host this equipment (Integration to SCADA system) | To be determined in WP5 in the "demonstration specification". |