

Wind Energ. Sci. Discuss., referee comment RC1
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Comment on wes-2022-73

Anonymous Referee #1

Referee comment on "A large-scale wind turbine model installed on a floating structure: experimental validation of the numerical design" by Federico Taruffi et al., Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2022-73-RC1>, 2022

The paper is overall interesting and well organized. Please try to improve it following the comments below:

- The authors need to cite paper doi:10.1088/1742-6596/2265/4/042008, also authored by them. The paper has some portions which are very similar to those of the one under consideration. Some figures are also identical. The authors need to clearly state which content is novel and which is not. As a general recommendation, results need to be repeated only when they bring added value to the new publication in terms of clarity or completeness. Too similar figures should be avoided.
- Please state which version of FAST (or OpenFAST?) has been used.
- Uncertainty estimation on experimental data could bring some added value.
- It seems that the authors did not use a yaw control (is this the case?). If so, I would suggest plotting the wind direction trend vs time to demonstrate to the reader that yawed functioning conditions are not affecting the results.
- The English form has some minor flaws. The most apparent one is "performances" that should be singular in technical writing. A revision by a native English speaker is suggested.
- The explanation for the discrepancies seen in Figure 14 is a little bit vague. Please try to better motivate the loss of performance in the below-rated region. Could this be associated with aerodynamics?
- As a general impression, the paper is very "descriptive", i.e., shows good results, but probably lacks a little bit of a critical perspective. I would recommend revising the final part of the paper in a way that could provide to the reader a more critical insight for example on the validity of the methods used for future studies, on the source of uncertainties in the real environment or in some prescriptions to manage wind turbines in multi-purpose platforms.