

Wind Energ. Sci. Discuss., referee comment RC1
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Comment on wes-2021-148

Anonymous Referee #1

Referee comment on "Model tests of a 10 MW semi-submersible floating wind turbine under waves and wind using hybrid method to integrate the rotor thrust and moments" by Felipe Vittori et al., Wind Energ. Sci. Discuss.,
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The authors present results from an experimental campaign on a scaled 10MW wind turbine model. The turbine is mounted on a floater designed by Saitec. Rotor forces are modelled with a SiL approach using 4 propellers. Experimental data is compared to a numerical OpenFAST model, and excellent agreement is found. Results appear credible and the methods seem solid. This said, I have some concerns regarding the scientific impact of this paper, which is not stated clearly. The original contributions of this work must be stated more clearly so that the scientific community can benefit from them. Some possible suggestions:

- better highlight some of the methods that were found to be effective in improving agreement between experimental and numerical approaches.

- provide additional analysis to better highlight open issues and provide outlook on how what would be needed to solve them.

More detailed comments in the attached pdf.

Please also note the supplement to this comment:

<https://wes.copernicus.org/preprints/wes-2021-148/wes-2021-148-RC1-supplement.pdf>