

Interactive comment on “Potential of load and O&M costs reductions of Multi Rotor System for the south Baltic Sea” by Maciej Karczewski et al.

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The paper addresses two highly interesting and important topics - loads and O&M of Multirotor systems. Therefore it is seen as highly relevant.

The paper appears to be two papers, one on cost modelling (chapter 2) and one on loads (chapter 3), whilst the conclusions seem to address only loads and not costs.

Although it is stated, that the whole paper has been written by the main author, it reads as two papers from different writers.

Chapter two on costs reads more like a business report with many assumptions on input parameters and a favourable result for MRS. That chapter lacks a scientific and deep analysis on costs and on O&M for MRS. E.g. a simple assumption of availability

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of 98% regardless of turbine type needs to be analysed. What is the failure rate and failure consequences of an MRS? How would the maintenance strategy look like and what is the impact on LCoE?

Chapter three deals with loads. Assumptions, input parameters, load cases are clearly stated. Results are clearly depicted. Discussion of the results is very interesting, but sometimes it seems a bit unfair comparison against the Single Rotor. E.g. it is obvious, that a small rotor produces smaller loads and deflections than a large rotor. Therefore fair comparisons need to be made, such as accumulated thrust forces or deflections and moments normalised on their mean value.

The referee recommends this paper to be published with major revisions in chapter 2, minor revisions in chapter 3 and a conclusion, which addresses all findings.

See pdf also

Please also note the supplement to this comment:

<https://wes.copernicus.org/preprints/wes-2020-23/wes-2020-23-RC2-supplement.pdf>

Interactive comment on Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2020-23, 2020>.