Wind Energ. Sci. Discuss., referee comment RC1
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Comment on wes-2021-55

Anonymous Referee #1

Referee comment on "Wind Turbine Ice Detection Using AEP Loss Method – A Case Study" by Jia Yi Jin et al., Wind Energ. Sci. Discuss., https://doi.org/10.5194/wes-2021-55-RC1, 2021

The manuscript deals with a comparison between two approaches for estimating the icing effect: a statistical method and CFD.
Although the main idea of comparing such approaches together is interesting, the whole paper seems vague to me.

- The goal of the study and the research question is not clearly stated, not in abstract, nor in conclusion and not even in the discussions. It is confusing why the comparison is implemented whether for validating CFD or validating the statistical method? Which method is faster or more efficient to be implemented comparing the accuracy and the computational costs?
- The results presentation needs to be improved via further postprocessing. They look more like the raw data in the tables. The only clear message of the paper to me is that the wake loss model is improving the CFD simulation. This is not sufficient for a comparison research. Perhaps the authors have gained more conclusions but the results are not well-organized or classified.
- The text is not smooth to read in addition to many grammatically issues and a vague structure.
- My detailed comments are uploaded in the pdf file, where I addressed the specific parts individually. Hope it helps to improve the paper and I believe that the idea of the paper is potential to be developed, but at this stage the research is not prepared to be published. I do not recommend it for publication.

Please also note the supplement to this comment:
https://wes.copernicus.org/preprints/wes-2021-55/wes-2021-55-RC1-supplement.pdf