

Wind Energ. Sci. Discuss., referee comment RC1
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Comment on wes-2022-52

Nicola Bodini (Referee)

Referee comment on "Current and future wind energy resources in the North Sea according to CMIP6" by Andrea N. Hahmann et al., Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2022-52-RC1>, 2022

The paper provides an estimate of the future changes in wind resource over the North Sea. To do so, a high-emission scenario is simulated in the CMIP6 models, which are first validated, in their historic portion, against reanalysis products, WRF simulations, and observations.

The topic is within the scope of WES. The paper is very well written, the methodology seems sound, and the standard of the figures is high enough for a peer-reviewed journal. In general, I do not have any major comments, so I would like to congratulate with the authors for a well-conducted analysis, and recommend publication of the paper after my few, very minor comments below have been addressed.

SPECIFIC COMMENTS:

- The last two sentences of the abstract seem to break the flow and are hard to connect to the rest of the abstract, I would suggest rephrasing.
- 67: a capital letter "I" should be changed to "i".
- 130: " to evaluate the boundary layer winds in the reanalysis datasets" is not clear since the reanalysis have not been introduced yet. Maybe it would be better to introduce the reanalysis first, and then the mast observations.
- 134: the sentence "We use the data from the 102 m." is not clear.
- 139: can we really consider the NEWA a reanalysis product? As you state in Table 2, it does not assimilate any observations.
- Figure 4: missing "." at the end of the figure caption.
- 280: broken reference.
- 300: there is a repetition in this sentence, please correct.