

Wind Energ. Sci. Discuss., referee comment RC2
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Comment on wes-2021-29

Didier Lemosse (Referee)

Referee comment on "Land-based wind turbines with flexible rail-transportable blades – Part 1: Conceptual design and aeroservoelastic performance" by Pietro Bortolotti et al., Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2021-29-RC2>, 2021

The presented study deals with the "complete" life of a wind turbine system, from construction and transportation to energy production. That study then introduced a lot of analysis processes and a lot of dedicated tools (blade design, airfoils, optimization patterns, coupled aero-servo-elastic simulations and so on).

Introducing the transportation of the blade from the construction factory to the wind turbines farm is a real challenge and may be treated in several ways. Here the authors want to evaluate the rail way transportation situation. This is a coupled problem because the transportation mode induced design constraints on the blades and then modify the whole system behaviour.

It is a really interesting and valuable contribution for the wind turbine domain development. The paper is more presented as an application study than as a scientific analysis, but nevertheless need to mastering a lot of scientific concepts altogether. The introduction part of the article could be modified in order to make its topic more obvious.

More details in the added document.

Please also note the supplement to this comment:
<https://wes.copernicus.org/preprints/wes-2021-29/wes-2021-29-RC2-supplement.pdf>