

## ***Interactive comment on “A surrogate model approach for associating wind farm load variations with turbine failures” by Laura Schröder et al.***

### **Anonymous Referee #2**

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"A surrogate model approach for associating wind farm load variations with turbine failures" is a very interesting contribution to the reliability assessment of major wind turbine components and the relation to fatigue loading. Further research in this field is necessary and important to allow an optimization of the O&M costs. The objectives of the paper are stated clearly and the methodology is well presented and easy to follow by the frequent use of flow-charts and formulas, which help to break down the scientific approach. This further helps the reproducibility of the study for future research. The challenge that the limited number of registered failures can cause is described in the paper and was respected in the discussion at the end. The title and abstract are representative of the content of the work, which is further concisely structured and good to read. The language is grammatically correct with the only exception of line

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25 which can be reviewed. The symbols used in the mathematical formulas and the algorithm have been well explained and consequently used when mentioned in the text. In line 170 the symbol for row spacing should be reviewed.

In conclusion it can be said that the presented work is interesting and represents a good contribution to the research of component reliability but also to the industry.

Further comments have been made in the attached pdf document.

Please also note the supplement to this comment:

<https://wes.copernicus.org/preprints/wes-2020-79/wes-2020-79-RC2-supplement.pdf>

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