

Wind Energ. Sci. Discuss., referee comment RC2  
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## **Comment on wes-2022-14**

Anonymous Referee #2

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Referee comment on "Optimization of wind farm portfolios for minimizing overall power fluctuations at selective frequencies – a case study of the Faroe Islands" by Turið Poulsen et al., Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2022-14-RC2>, 2022

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This paper is addressing the minimization of the overall power fluctuations for different wind farm portfolios. In general, the proposed method has the potential for publication in WES. I have the following comments:

- The 5th and 95th percentiles of the step change function of wind power time series are used as statistical variability metrics in this paper, which from my point of view represent the range of power fluctuations. It could be more descriptive if the authors were also looking at mean and standard deviation.
  
- This paper should be restructured to improve its readability. The Section Introduction needs to improve. Please follow this sequence: problem definition and motivation for research in this field, literature review, and the main contributions of this research. Subsection "A note on ignoring the wind farm smoothing effect" could move to the introduction as the paper assumptions. The Section "Data" could merge with the Section "Result". Optimization theory in Subsection "Optimization of wind farm capacities" is better to move to Section "Method".

