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Discussions

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Interactive comment

Interactive comment on "More HomogeneousWind Conditions Under Strong Climate Change Decrease the Potential for Inter-State Balancing of Electricity in Europe" *by* Jan Wohland et al.

Anonymous Referee #2

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Comments to the Editors

The manuscript under review presents a study of the impacts of strong climate change on the operation of a fully renewable European power system using future projections from the EURO-CORDEX dynamically downscaled regional climate ensemble. To assess the impact the authors compare historical and future backup energy needs, allowing for trans-national transmission. The authors consider this 'network expansion' as the cost-optimal adaptation strategy, rather than exploring the incorporation of storage capacity.

My recommendation is that this paper could be considered for publication after minor revision. In my opinion, the weakest points of the paper is the fact that the analysis of the results if often unclear given the author's definitions and use for expressions such as 'backup energy' and 'backup needs'. Given that the article has been submitted to a journal where authors and readers come from a diverse range of backgrounds (and probably most of them lack any specific energy-related experience), I believe that a clear nomenclature is fundamental.

An extended set of additional comments was prepared to aid the authors in the improvements of different sections of the paper. (See attached pdf with comments for the Authors)

Please also note the supplement to this comment:
https://www.earth-syst-dynam-discuss.net/esd-2017-48/esd-2017-48-RC2-supplement.pdf

Interactive comment on Earth Syst. Dynam. Discuss., https://doi.org/10.5194/esd-2017-48, 2017.