

Interactive comment on “Ancillary services from wind turbines: AGC from a single Type 4 turbine” by Eldrich Rebello et al.

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Received and published: 7 August 2019

— Author’s comments We emphasise that although the question of providing various ancillary services from wind generators has been addressed before (albeit at a largely theoretical level), it has not been addressed at a granular level i.e. it has not been examined in the level of detail presented in our work. The broad questions of which other sources can provide AGC in a more cost-effective manner is not our focus. We focus solely on evaluating the ability of commercially available wind generation technology to provide AGC. Addressing topics such as when a wind turbine cannot provide AGC and forecast errors are beyond the scope of this work.

Specific comment: In the reviewer’s opinion, it is really not a good idea to ask the

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wind turbine to provide continuous AGC unless there is no other alternatives, which indicates a poor system design from the very beginning

The question of providing AGC from a wind turbine is very important to the design of a fossil-free grid and we feel that this does not indicate ‘poor system design’. Whether or not a wind turbine is the best choice for providing regulation at any point is a separate question. —

The question of de-rating a wind turbine to provide AGC is reasonable but this is not one that is directly relevant to our work. We focus primarily on the ability of the wind turbine to provide up- and down-regulation. How to improve this is a separate discussion entirely. This issue is already dealt with in the introduction to the paper.

The idea that other generation sources can provide AGC is valid but this does not invalidate the need to investigate the ability of wind generators to provide AGC.

Interactive comment on Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2019-26>, 2019.

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