

Interactive comment on “Minute-scale power forecast of offshore wind turbines using single-Doppler long-range lidar measurements” by Frauke Theuer et al.

Anonymous Referee #1

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General Comment:

This is a very well written and thorough study looking at using a single doppler lidar for minute-scale wind/power forecasts. The authors took a very systematic approach to the study, leveraging previous work/studies. They especially did a good job discussing and considering the possible causes of their results, especially when results were not favorable (stable conditions). I only have a few minor questions/ comments.

Specific Comments:

1) Lidar is still reliant on the presence of aerosols. While sea salt is often present in marine environments, the author should acknowledge that issue (line 45/46)

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2) Line 253: were these algorithms run in real time? If so, what were you interpolating the SST measurements to past noon? Was it interpolated using the trend in SST? If this algorithm was not run in real time, will a buoy need to be deployed in addition to the lidar to provide SST measurements when applied in real time? Please add additional detail.

Technical corrections:

1) I would advise against using words like “very” as it has no concrete meaning. Example in line 32

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