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Interactive comment on "Estimating the wake deflection downstream of a wind turbine in different atmospheric stabilities: An LES study" *by* Lukas Vollmer et al.

Anonymous Referee #2

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Intentional yaw misalignment of wind turbines as a way to control/optimize wind farm performance is indeed a relevant scientific topic. One part of this question is the potential for increased power production – another aspect is the increased loading following from WT yaw operation, which in principle is a cost. This paper links to the first mentioned aspect only and discusses whether or not the required (precise) knowledge of downstream wake trajectories can be achieved. This is crucial for the relevance of wind farm yaw control. The paper ends by concluding that for highly convective flow conditions, wind farm yaw control cannot be recommended, whereas the approach might be feasible under SBL conditions. However, there is no firm conclusion on the perspectives for the yaw-control approach under NBL conditions

– i.e. whether sufficient precise knowledge of downstream wake trajectories is likely achievable in practice. The scientific approach is sound, but the representativeness of the selected SBL/CBL cases should be discussed. References to relevant related work are in general good, but a few additional references should be added. The suggested references are found in the attached detailed pdf-review at the relevant passages in the manuscript. The detailed review moreover indicates a few misprints, asks for a few additional discussions/clarifications and suggests some editorial modifications.

Please also note the supplement to this comment:
http://www.wind-energ-sci-discuss.net/wes-2016-4/wes-2016-4-RC2-supplement.pdf

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