

Interactive comment on “Control-oriented Linear Dynamic Wind Farm Flow and Operation Model” by Jonas Kazda and Nicolaos Antonio Cutululis

Anonymous Referee #3

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Apart from the technical questions in previous reviews, which are all relevant and cannot be disregarded too quickly, perhaps it is good to better place this paper in existing work, by extending the introduction and trying to address the following:

- Specifically, what is new about the given approach of using the Kalman filter? Kalman filters have been used by Doekemeijer (<https://doi.org/10.1088/1742-6596/753/5/052015>), and Gebraad (PhD thesis), and both works also show the reduction in prediction error. Maybe it can be argued that these previous works are even stronger, because they use high-fidelity LES simulations to compare to. Also, even earlier work in Soleihmanzadeh's PhD thesis (Paper D) is worth comparing to, because it uses a linear model, with H2 control (i.e., implicitly, some filtering of output measurements (eq 8.43) to estimate the state).

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- What is the importance of including dynamics? You could discuss the importance of transport delays in wake dynamics in large wind farms. Can you point out some specific issues?

- Is it necessary or desirable to go to linear control? Does it not simplify too much?

These points have to be clarified in the introduction of the paper, to motivate its relevance.

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