December 7, 2017

Dear Editor,

We wish to submit a research article entitled “Dynamic strategies for yaw and induction control of wind farms based on large-eddy simulation and optimization” for consideration for publication in Energies. We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication.

In the current paper we present novel induction and yaw control strategies for increased aggregated wind-farm power extraction. Through the use of large-eddy simulation and adjoint gradient-based optimization, power extraction can be increased significantly in optimal control simulations. Furthermore, analysis of optimal control signals has led to the identification of simplified yaw control strategies. Also, the paper illustrates benefits of dynamic over static control, and shows the potential of combining yaw and induction control is for the first time in literature.

We believe that the manuscript is appropriate for publication in Energies since it presents new strategies for wind-farm control that could be used for increasing power extraction in currently operational wind farms. Furthermore, the manuscript presents a first quantitative comparison between the prevailing wind-farm control strategies, i.e. axial induction control and yaw control, identifying the latter as the most promising strategy for the wind-farm setup at hand. Also, the manuscript provides a first investigation into dynamic yaw control as opposed to static yaw control studies prevailing in literature. Finally, evidence of the potential of combining yaw and induction control will spark new research studies in this area.

We have no conflicts of interest to disclose.

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Thank you for your consideration of this manuscript.

Sincerely,

Wim Munters