

## **Response to Alessandro Bianchini**

Thank you very much for taking your time to read this.

We inform you that we have made the minor changes:

An explanation of how the chord-to-radius ratio (which affects the solidity) of the turbine affects the solidity was added. It is explained why the flow curvature alters the boundary layers and both the lift and drag coefficient of the airfoil. Evidence from a reference that we included shows that increasing the chord-to-radius ratio of the turbine is detrimental for the power generation.

We already include valid values of solidity for different models such as the double multiple-stream tube model and the actuator cylinder model.

We believe that we explain clearly how the values of solidity affect the power coefficient of the turbine. Unfortunately the Windspire turbine is somehow difficult to analyze with any of the simple models mentioned above. We aim our research to large wind turbines (offshore), as we have observed that the actuator cylinder model yields much better results when the solidity is low.

We appreciate all of your feedback which was invaluable for the completion of the manuscript.

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