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Interactive comment on "The most similar predictor – on selecting measurement locations for wind resource assessment" *by* Andreas Bechmann et al.

Andreas Bechmann et al.

andh@dtu.dk

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Dear referee,

Thank you for the constructive feedback.

I understand the comments about the "flow" of the paper and making the introduction more robust. The introduction has been revisited and expanded with a paragraph that tries to link to the conclusion better. The conclusion has also been edited to try and establish a flow throughout the paper.

Regarding the specific comments:

Q: What spatial resolution would be necessary? A: To answer this question I think we need to clarify that we are operating with two different data sources and therefore two different resolutions: 1. the resolution of the met masts and WRF model results and 2. the resolution of the micro-scale model used to determine the most similar location. Met masts are placed with a spacing of a few km (3.1 km on average in this work); which is similar to the grid spacing of WRF simulations (1-5 km). The resolution of met masts and WRF grid points is therefore comparable. To determine the most similar predictor (mast location or WRF-point), we use a micro-scale flow model that operates with a much finer resolution (1-50 m). A small description is added to the conclusions of the manuscript to clarify this.

Q: Line 88: Define RIX, and how it is determined. A: RIX is defined by the percentage fraction of the terrain along the prevailing wind direction, which is over a critical slope of 0.3. The definition has been added to the manuscript.

Q: Section 2.2: Give more details about the model setup. At what resolution are the topography maps? What source did they come from? Where did the met mast data come from? Providing more information will speak to the reliability of the dataset used. A: I fully understand and agree that transparency regarding the dataset is essential. Confidentiality constraints restrict us in some sense, but the large volume of data also makes it hard to describe it in detail as every wind farm site is different, including anemometer types/calibration and map resolutions. Vestas has provided both the wind and topography data, and we use it directly without corrections or quality control. However, as all data has previously been analysed and scrutinised in connection with wind farm development, we consider the data to have an industry-standard quality. This information is added to the manuscript.

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