The revised manuscript describes and evaluates methods to long-term correct a time series of wind farm production from an offshore wind farm calculated with a high-fidelity model. The main approach is to use a probabilistic wind farm power curve derived from the shorter time series and to integrate over the joint probability functions of power curve and wind speed from the long-term data set to derive the long-term corrected mean energy production of the wind farm. In addition, the authors compare different simple day-selection methods for the high-fidelity time series and demonstrate how the results converge with the number of days used for the day-selection methods in isolation and in combination with the long-term correction method.

The revision of the manuscript makes the objective much clearer. Apart from some bad editing (e.g. duplicated words) which should be corrected, my main points of criticism on the revised manuscript are:

- The authors mention that the method is applicable if the probabilistic wind farm power curve derived from the short-term time series approximates the “true” long-term power curve (equation 7). The distribution in each wind speed bin represents the influence of other meteorological measures like most importantly the wind direction. For the probabilistic power curve of the short-term sample to be close to the long-term equivalent, the distributions of these other meteorological measures should be similar to their long-term distributions. For a symmetric wind farm the wind speed distribution might be sufficient to describe the long-term mean, as evident by the good performance of the *ordered* method to select the sampled days even without using a the long-term correction. But most wind farms are not symmetric and have wind directions in which the wake losses are clearly higher than for other. The described methods provide no mean to evaluate this; thus the method should only be considered as suitable for wind farms with a layout for which the wake losses are mostly independent of wind direction.
- (l. 200) A 0.35 m/s difference is not a small bias in the context of wind farm siting at a site with a mean wind speed of around 9 m/s. This corresponds to a bias of gross power of at least 5%. Also, the relative sentence "which is typical in this application" needs more context. If a wind speed bias of 4% is typical for LES, then it is worse than typical biases reported from e.g. mesoscale simulations (Hahmann et al. https://doi.org/10.5194/gmd-13-5053-2020).

I think the manuscript is worth publishing if the authors clearly mention the shortcomings listed above in their conclusion.

Other comments:

- L. 235 - "involved techniques" - you probably mean "evolved"
- L. 337 ff. - Labelling the MCP-corrected wind speed "MCP wind" seems odd. Please find a different name.