

# Response to referee comments: third round

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We are pleased that the reviewers found our modifications to the previous manuscript satisfactory. In addition, we would like to thank the referees and the Copernicus editorial team for their valuable time and expertise throughout this process. In the following, the reviewers' minor comments are presented followed by our answers in blue. Minimal changes have been applied to the comments to make them compatible with the used text editor.

- 5 Following the guidelines for re-submission of a revised manuscript, we have added a list of relevant changes for each comment after the answer is given. The figures and lines numbering is based on the revised manuscript (without track-change).

## 1 RC1

No further comments were provided.

## 2 RC2

- 10 1: Regarding Figure 4, which presents the time history of the power coefficient for an ASM case across various mesh resolutions, it is noted that the text within the figure is too small to be legible.

Answer: The font size is increased to improve readability.

The list of relevant changes:

- The font size in Fig.4 is increased. The new figure replaces the old one.

- 15 2: In Figure 4, the power is normalized with  $0.5\rho AV^3$ , it appears that the variable  $V$  has not been explicitly defined.

Answer: We replace the variable  $V$  with  $U_0$  which is already explicitly introduced in the text as the inflow velocity. In addition, the variable  $V$  is replaced with  $U_0$  for Fig.2. Moreover, the variables  $\rho$  and  $A$  are introduced as air density and rotor area respectively in line 107.

The list of relevant changes:

- 20 – New Fig.2 and Fig.4 replaced the old ones. Now, variable  $V$  is replaced with  $U_0$ .
- The variables  $\rho$  and  $A$  are introduced in line 107.

3: It is suggested to include the BEM formulas before using them as a reference, particularly in the context of Figures 16 and 18.

25 Answer: Following the comment from one of the reviewers in a previous round, we have already added a brief description of the BEM with the relevant citation in the "Model Description" section, lines 104-106. Since the BEM formulas can be readily found in many textbooks and papers, we believe it would be redundant to add them to the text. However, please let us know if you think it is necessary to include them.

### 3 Final words

We would like to thank the referees and the editorial team again. We did our best to address the received comments. We kindly  
30 ask you to inform us about any further required changes and clarifications if necessary.

Kind Regards,

The authors