Response to Referee Abdul Baseer:

[Referee] The article deals with important problem that would be significant in the design of the future bigger wind turbines structures. The scientific quality of the manuscript is quite good. The abstract and the conclusion covers the content of the manuscript clearly and the sections are well structured. The manuscript covered sufficient literature. The results are clearly descried and the discussion is well presented and emphasized with comparison with other published papers.

However there are some additional clarity or corrections are required:

What are the natural frequencies of the system?

[Authors] For the current rotation speed, the first two natural frequencies are 0.231 and 0.233 Hz which are tower natural frequencies. The third to sixth natural frequencies are blades flapwise which are: 0.709, 0.826, 0.839 and 0.899 Hz. The seventh to the tenth are: 1.04, 1.059, 1.477 and 1.496 Hz which represent the blades edgewise natural frequencies. That means the operation conditions for this simulation is not in the resonance condition.

[Referee] The biggest flapwise deflection occurs at about 225◦ from the tower position which is something expected as the blade is subjected to the highest thrust when the blade is at the top (highest wind speed). What is the reason for the delay?

[Authors] The structure response of the blades and the tower are due to the structure inertia. For the current wind turbine model and simulation conditions, a blade flapwise delay response of 0.5 sec is noticed as the blade passes in front of the tower, similar delay is also noticed as the blade exposed to the higher wind speed as you mentioned at the top of the rotation circle.

[Referee] Why is the amplitude deflection in BEM bigger than CFD?

[Authors] Apparently BEM predicted higher thrust than CFD by 22.4%. That can be related to the fact that the BEM does not predict the thrust accurately in the case of flow separation or overestimate it which in this case occurs near the blades root. Furthermore, BEM can give only one constant value for a certain operation condition (as the method is based on the wind tunnel measured lift and drag coefficients), in contrast, CFD uses advanced turbulent models to predict the transient lift and drag forces of the blades which might be different from the previous rotation of the same blade position.