

### Overall

- The paper is well-written and thorough. It is still missing a bit of substance that really motivates the importance of the paper. Can you further elevate and pull out what are the big challenges / exciting developments and emphasize them further in the abstract, intro and conclusions?
- There are a few typos that a final edit will catch
- The structure of sections 2 through 5 might be revisited. Section 2.5 could be its own section. Sections 4 and 5 could be integrated into section 3 – they don't stand well on their own

### Abstract

- The abstract has a bit of redundancy and is a bit lacking in terms of a punchline – consider pulling out a few key highlights from the paper and emphasizing here. What are the biggest challenges? What are the most significant trends? Innovation game changers?

### Introduction

- The added paragraph in the introduction seems to be tangential – it seems like it would fit better in section 2 as it speaks to design drivers
- The intro is still missing a bit of the why. The first paragraph is good – gigantic machinery in new environments (i.e. floating) are challenging the status quo – maybe provide an example or two of what specifically for drivetrains is so challenging? Have there been some instances of serial failures or is there an expectation that moving to 20 MW size turbines poses new challenges? Have digital twins shown potential to unlock potential for O&M cost reductions / significant increases to availability?

### Design trends and developments

- The shift towards SGs for offshore is largely driven (to my understand) by the desire to move to direct-drive systems and eliminate gearboxes offshore – is that not the case?
- For figure 1 – it might be better to split into two figures – one showing a geared and one showing a direct-drive configuration since the righthand now is mixing elements of each. The middle figures could be expanded with labels pointing to the major components of each
- I agree with the reviewer that section 2.5 still seems out of place. Maybe it should be its own section?

### Emerging areas

- Consider adding a short introductory paragraph before section 6.1 explaining why these 3 topics are so important to consider
- In terms of loading from control strategies, there is a good bit of work on the topic from NREL and SNL that would be worth pulling out. There was a lot of work

particularly looking at main bearing loads... also yaw bearing though the yaw system is not considered in this work

- I would have expected to see a bit more on digitalization and digital twins – perhaps the literature on the topic is not that extensive yet?