

Interactive comment on “Proposal for Generic Characterization of Electrical Test Benches for AC- and HVDC-Connected Wind Power Plants” by Behnam Nouri et al.

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Dear Authors, Thanks a lot for the article; it gives a very good overview of existing standards and test proposals as well as future needs and possibilities for test & validation procedures, to ensure a stable grid operation. In general, I have the following proposals to improve the article:

1. Add a little bit more explanation on “Why” you mean the proposed new tests are necessary from the system perspective - system impact. (Black start, Grid forming, etc.)

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2. It would be nice to elaborate a little bit more on the transferability and assessment procedures from the proposed test bench results to Wind power plant operation, e.g. by validation of simulation models. (As the title suggest to validate the characteristics of Wind power plants), as well as the limits for the test bench tests – can anything be validated on the converter based test bench.

3. It would be beneficial for the reader and understanding of the article if you could distinguish between tests, which are necessary for the design of the Wind turbine and components (Design validation) as well as tests necessary for the grid connection and interaction with the grid. E.g. will the test of harmonic background (chapter 4.1.4) / harmonic injection be relevant to validate the design of the components (design validation), as well as potential tests for new features / harmonic filtering and last but not least harmonic stability analysis. You should consider maybe to separate the tests into – design validation of the wind turbines and components, and test necessary for the grid operation under various grid conditions.

Some more specific comments:

Chapter 5.1.5 better use the wording: “Grid Protection test” not disconnection test. Figure 3. – Use bigger symbols for the Drive motor / generator Figure 2 - Add description of the filter.

Overall a very good article and only minor comments from my side.

BR. Björn

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