Interactive comment on "The Power Curve Working Group's Assessment of Wind Turbine Power Performance Prediction Methods" *by* Joseph C. Y. Lee et al.

Anonymous Referee #2

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The paper studies the power curve modelling and deals with how its accuracy and uncertainty can be improved. The proposed work found to be interesting and the following comments can further improve the qualities of the paper contents. 1. Baseline method i.e, binning though being used by most turbine operators but has its own flaws such as data averaging issue, slow to respond, As discussed in below paper. The author should explore more about the weakness that baseline method had. Comparing the proposed technique with a technique that already have some issue, may affect the proposed model accuracy as compare to binning. 'Comparison of binned and Gaussian Process based wind turbine power curves for condition monitoring purposes' 2. Power is well known to be influenced by air density and this is reflected in the IEC Standard air

density correction procedure. IEC standard recommended air density correction does not give the most accurate power curve as suggested by the following articles. They have shown, power curve accuracy and uncertainty can be improved by adding air density correction instead of doing IEC precorrection. I think the paper must discuss this to improve the qualities of papers. ' Bulaevskaya V, Wharton S, Clifton A, Qualley G, Miller WO. Wind power curve modeling in simple and complex terrain using statistical models'. 'Incorporating air density into a Gaussian process wind turbine power curve model for improving fitting accuracy' 3. It would be great if the sample of data made public for a wide audience for improving the power performance of turbines.

Overall, the proposed work makes a significant contribution towards improving power curve accuracy as well as uncertainty.

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