

Interactive comment on “Statistical characterization of roughness uncertainty and impact on wind resource estimation” by Mark Kelly and Hans Ejsing

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The authors are grateful for the helpful comments of referee #1. We take the advice for reducing the length and complexity of a number of sentences which may be difficult to understand, and will submit a revision accordingly; this revision also includes the minor corrections suggested in this first comment/review.

The expression on line 16 of page 3 included a ‘typo’, and has been corrected to “... u_* is effectively constant from the surface up to height z (i.e. $du_*^2/dz \ll \sigma_u^2/\ell_{ABL}$, Wyngaard 2010).”

Regarding the title of sub-section 3.1.1, “Uncertainty in observation-based z_0 ”, I dis-

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agree with the referee's suggestion to insert 'the' after 'in'. I respectfully decline, because the intent of the subsection is more general than simply covering just one dataset: we discuss uncertainty in z_0 as obtainable from measurements within the general framework given in the previous section, and through introduction of the metric $w_{\langle z_0 \rangle_{RS}} / \langle \langle z_0 \rangle_{RS} \rangle_g$ (dimensionless roughness-distribution width).

On page 10, line 22, we correct '(9)' to be equation '(4)'. We have also clarified the sentence on page 18 (before equation 11).

For the conclusion, we will attempt to make the revision's conclusion more concise, considering bullet-points as suggested.

[Interactive comment on Wind Energ. Sci. Discuss., doi:10.5194/wes-2016-36, 2016.](#)

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