Interactive comment on “Year-to-year correlation, record length, and overconfidence in wind resource assessment” by Nicola Bodini et al.

Nicola Bodini et al.
markh@enduringenergyllc.com
Received and published: 30 June 2016

Response to Referee 1

We thank the referee for comments that have helped us clarify our presentation, as we indicate below:

RC1: ... it seems that there are a number of stations which exhibit a capacity factor of over 0.4 during 62 years, but have been excluded due to having a capacity factor of 0.2 or less during the last 20 years. In addition, four of them also show very low variability of the order of 0.1. Is the long-term stilling trend really so strong at those stations, and are there any indication why?
Authors: In fact, these high-capacity-factor stations you note were excluded not because of capacity factor being lower than 0.2 during the last 20 years, but because of poor data quality, as described in the ms.: “We further eliminate another 13 stations that have more than a single isolated year with no or scant monthly data.” (Pg. 4, Line 22).

RC1: Second, it is stated in P3L55 that “the cut-off also reduced the trend observed in Fig. 1 (R^2 = 0.11)”. The value of 0.11 indicates large scatter, but in the figure the filled markers seem rather organized.
Authors: We have corrected the value in the ms. to R^2 = 0.15.

RC1: And lastly, it might be better to replace circles in Fig. 3 with squares or similar, to clearly distinguish the filling criterium from the one used in Fig. 1. There the filling corresponds to a threshold in the capacity, while here the threshold refers to the trend.
Authors: The symbol filling scheme we chose here helps the viewer easily visualize the marginal distributions of the selected low-trend stations (filled circles), while minimizing distraction from the excluded stations (unfilled symbols), so we're reluctant to change the plotting scheme. But, we have added legends, as shown in the accompanying figures, to ensure there's no confusion.

60 selected stations
low capacity factor stations
poor data-quality stations

σ/μ

0.0 0.1 0.2 0.3 0.4 0.5

62-year average capacity factor μ

Fig. 1. Figure 1, new version

C3

low-trend subset
other stations

-0.10
-0.05
0.00
0.05
Δμ

0.20 0.25 0.30 0.35 0.40 0.45 0.50

62-year average capacity factor μ

Fig. 2. Figure 3, new version

C4