

Moreno-Montes et al 2026 Reviewer Comments

Title: Decadal predictions of wind, solar and compound power indicators to support the European renewable energy sector

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Specific Comments

- Page 2, lines 26-27: “the intermediate horizon of next years remains comparatively underexploited”
 - Surely this should be “the intermediate horizon of the next few years remains comparatively underexploited”?
- Page 6, line 179-180: “For each forecast system, the same number of DCPD and HIST members is selected, corresponding to the minimum ensemble size”
 - “...the same number of DCPD and HIST members are selected, corresponding...”
- Page 9 lines 246-247: “During MAM and SON (Figure 1m,o), positive ResCorr values are restricted to specific regions, mainly over eastern Europe and parts of the Atlantic coast in MAM and over northern Atlantic regions in SON”
 - I am not clear where this ‘northern Atlantic’ region of rescorr skill is visible in Figure 1. Where is this region?
- Page 11, lines 285-291: “Figure S10 shows the climatology (Figure S10a–e) multiannual standard deviation (Figure S10f–j) of WCF for the annual and seasonal means. The climatological patterns follow a distribution of wind resources over Europe, with higher WCF values over the northern Europe and lower values over southern and Mediterranean regions, together with a clear seasonal cycle (Bett and Thornton, 2016) and higher values offshore than onshore. Unlike PVpot, WCF exhibits a non-negligible multiannual standard deviation, with the largest values (up to 5–6 percentage points) occurring mainly in DJF and over northern Europe, reflecting stronger year-to-year wind variability. This reflects the intrinsically high variability of wind and the non-linear turbine power curve, which translates wind fluctuations into larger variations in WCF.”
 - This is more of a structuring point than a science point, however I think the results section would flow better if you were able to discuss the findings shown in the main figures first (e.g., Figures 1, 3, and 5) and then

use evidence from the supplementary figures to support this, rather than introduce the climatological mean and standard deviation (from the supplementary information) before then discussing the main figure. I appreciate this may not be possible in all parts of the paper, however I do think that restructuring in this way would make it easier for the reader.

- Page 11, lines 299-300: “The spatial distribution and the percentage of significant grid points for WCF closely resemble those obtained for SFCWIND (Figure S9k-o)”
 - Looking at the supplementary material, I believe this should refer to Figure S7k-o, rather than S9k-o.
- Page 13, lines 318-319: “HIST exhibits higher skill than DCPD in DJF (Figure 3g), particularly over Mediterranean regions. In contrast, HIST shows slightly lower skill than DCPD in MAM and JJA (Figure 3h-i)”
 - I accept that the skill over Iberia and Northern Africa appears stronger for the HIST result in 3g compared to the DCPD result in 3b, however in the MAM and JJA case I think the magnitude of skill (i.e., the red shading) is being conflated with the area of significant positive skill. Perhaps it would be more useful to be more specific about whether you are referring to the significant area % or the magnitude of the skill here.
- Page 15, lines 388-390: “Overall, HIST reproduces the main spatial pattern found in DCPD, although the relative skill varies by season. HIST shows slightly lower skill than DCPD in MAM (Figure 5h) and particularly in JJA (Figure 5i), whereas it has higher skill in DJF (Figure 5g)”
 - As mentioned above, I feel that the magnitude of skill is being conflated with the area of significant positive skill. To my eye, generally the magnitudes of skill look similar (i.e., similar shades of red) between the DCPD and hist in Figure 5 for DJF, MAM, and JJA. However, the fractions of significant area are different. Consider rephrasing for greater clarity on what exactly you are referring to with ‘higher’ or ‘lower’ skill here.
- Page 18, lines 414-416: “In JJA, the strong negative NED 415 trends in both ERA5 and DCPD are primarily associated with marked increases in solar-Neff (Figure S18a-b), while wind-Neff changes are weaker (Figure S18c-d)”
 - Currently Figure S18 is labelled a) b) a) b), please could you update the bottom row to c) d) for clarity here.