

Wind Energ. Sci. Discuss., author comment AC4
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Reply on RC2

Charles Tripp et al.

Author comment on "A simplified, efficient approach to hybrid wind and solar plant site optimization" by Charles Tripp et al., Wind Energ. Sci. Discuss.,
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Thank you for your thoughtful review of our manuscript, 'A Simplified, Efficient Approach to Hybrid Wind and Solar Plant Site Optimization'.

We agree that interconnect utilization, particularly with land use constraints in mind, can be a useful optimization objective. To demonstrate the method's ability to optimize objectives other than AEP, we have included an additional subsection and figure showing and discussing the results of optimizing layouts with this objective for interconnect capacities ranging from 20 to 60MW. We have also added some additional discussion of interconnect utilization in the objective function section and expanded our discussion of applying the optimizer to additional objectives to the future work section in the conclusion.

We also agree that land use restrictions are an important concern for many hybrid plant installations. Land use constraints can be applied to the optimization process in the same way that boundary constraints were applied: solar modules were simply excluded from disallowed zones while turbines were moved to the nearest valid location (if no valid location was identified, they were simply removed from the layout). By associating a quadratic penalty with invalid turbine placements, we encourage the solver to focus its efforts on generating valid layouts. Variable land use costs could also be incorporated in a

similar fashion if these costs are accounted for by the objective function. We have added additional discussion of land use restrictions to both the objective function section and included exploring land use issues further in the future work listed in the conclusion.

Thank you again for your time and review.