Dear Stan,

Thanks for this opportunity to address a few remaining issues with this paper. Our responses are given in red.

Dear authors,
Thanks again for the careful revision of the manuscript and detailed responses to referee comments. The referees are both supporting publication of your article now, subject to technical corrections. I would still like you to consider/address a few last points before publication, as listed below. Thanks again for your patience and commitment to high quality research.

Best regards,
Stan

L193: In your response about surface-atmosphere feedback, you mention humidity, but not temperature, as suggested by the referee. Could you add this to your consideration?

Yes, thank you. The two sentences now read: "This results in a drier and warmer lower atmosphere, which increases apparent potential (wet patch) evaporation. Conversely, if the lower atmosphere becomes dry and warm (in the absence of significant dry advection), this implies that regional evaporation rates are low."

L261: Should be McMahon.

Thank you for catching this. It has been changed (see text two responses down).

L262: The Penman equation is not based on any assumptions about adjustments of atmosheric temperature and humidity, please correct. Could you also mention that Slatyer and McIlroy (1961) advised against such averaging: Slatyer and McIlroy (1961, P. 3-38): "However, use of average values in equations like 3.13, containing products of variable quantities, means neglecting the effects of short-term correlations between these quantities, which could sometimes lead to significant errors".

Thank you. This point and the next all refer to the same paragraph which we have reworked considerably, and provide below the next point.

L264-266: The reader would benefit a lot from a comparison between values obtained using hourly and monthly data. Here it sounds as if the results would be similar, but this is in contrast to the statement by Slatyer and McIlroy mentioned above.

The paragraph has been re-written and now includes two paragraphs. Our response to the last three comments is included in this text:

The CR has been used at time scales from hourly to yearly (Brutsaert, 2023, p. 147), but the CR, the Penman equation (1), and the Priestley-Taylor equation (5) most typically use daily- to monthly-average values (McMahon, 2013). It is true that use of time-averages of variables as inputs to non-linear equations can lead to "significant errors" (Slatyer and McIlroy, 1961, p. 3-58). However, CR and the Priestley-Taylor wet-surface equation both assume that that the land-surface conditions and the temperature and humidity in the lower atmosphere are well-adjusted to each other (Brutsaert, 2023, p. 147). The diurnal cycle makes this adjustment unlikely over periods less than 24 hours (McMahon, 2013). Therefore, the approach here is to use daily (monthly) average input values to produce daily (monthly) energy fluxes (e.g., Penman, 1948; McMahon, 2013; Brutsaert, 2023). That is, daily to monthly time scales are suited to these equations, as spatial scales corresponding to small watersheds are suited to saturation-excess runoff (e.g., Chow et al., 1988).

With this dataset, the monthly (daily) mean of reference latent heat flux is 61 W m^{-2} (62 W m^{-2}), the median is 58 W m^{-2} (56 W m^{-2}) and the standard deviation is 41 W m^{-2} (48 W m^{-2}). Thus, the central tendencies for monthly and daily values are similar, but the daily has more spread about the mean.

L587: Please also create a release of the github repo and publish it on a suitable archiving platform (e.g. zenodo.org), to create a static version with its own DOI. See https://www.hydrology-and-earth-system-sciences.net/policies/data_policy.html

We put the data files and the Python code in a zenodo.org repository. Note that we used to have directions on how to run the code directly in GitHub. With zenodo.com those very specific directions are no longer needed, but the "description" on zenodo introduces the project and provides brief instructions.

Report 2:

The manucript was substantially improved and my comments have been responded well. I think it is ready for publishing.
The symbol 'T' are used in both Line 284 and Line 209. Please revise it.

We addressed this near line 209:

A straight line with slope de/dT_g=-γ (where T_g is a generic temperature variable) represents an isenthalp (line of constant available energy) through (T_a, e_a) on a graph of temperature (x-axis) versus vapor pressure (e on the y-axis).

Report 1:

The authors have addressed the comments. With the mentioned corrections and clarifications in the reply letter and the improvement of figures, the paper is recommended for acceptance.

One additional change was made to the text to clarify the data filtering process. The change was at the start of the third paragraph (in this latest revision) of section 3.3. The new wording is:

> "Months (or days) with eddy covariance values of H and LE less than zero or $(R_n\text{-}G)<0$ were screened out of the dataset; this eliminates periods of strong dry advection that result in negative H_{ref}."