Review of: "Technical and Financial Viability of a 1 MW CSP Power Plant with Organic Rankine Module: Case Study for a Northeastern Brazilian City"

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Potential competing interests: No potential competing interests to declare.

The paper presents a study of a 1 MWe parabolic trough solar power plant using an organic Rankine cycle to convert thermal energy into electricity. It provides valuable information on an extremely important subject. However, the structure of the document is not fluid and requires some adjustments.

1. The introduction section needs substantial improvement. It would be desirable to include the motivations that led to this research being undertaken, followed by a detailed explanation of the methods used, and finally, a presentation of the benefits envisaged.
2. Before entering into the modelling, it would be helpful to add a synoptic diagram representing the different blocks of the system. This would make it easier to understand the following sections.
3. The choice of days for simulating the energy circulating in the power plant, from incident radiation to the energy produced during a sampling day, should be justified by opting for the worst-case conditions. This would enable the different forms of energy to be evaluated and the economic parameters such as the discounted cost of electricity, thermal energy storage capacities, etc. to be estimated correctly.
4. The instantaneous relationship between the different forms of energy shown in Figure 2, in particular the maximum values between incident and stored energy, requires further justification.
5. Given the existence of global competitors in energy production, mentioned in the conclusion section, it would be sensible to include, before this section, a comparative study in the form of a table illustrating the advantages of the system studied compared with other existing solutions. This would reinforce the significant contribution of the study in the current context of energy production.