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

Muhammad Paend Bakht[1]

1 Balochistan University of Information Technology & Management Sciences

Potential competing interests: No potential competing interests to declare.

The research work assesses the feasibility of concentrated solar power plant for a Brazilian city. The research topic is compelling and useful for the energy researchers and policy makers. Contributions and novelty of work are properly highlighted in the introduction section. However some suggestions should be considered to improve the understanding and quality of paper.

1. Instead of utilizing the abbreviation 'CSP' in the title, it is recommended to use the complete term. Not all energy researchers may be familiar with this acronym, and it is generally advisable to avoid abbreviations in titles or headings.
2. The explanation following the cross-reference [9] in the introduction section lacks clarity for readers. A revision is suggested with a focus on improving understanding from the reader's perspective.
3. Figure 1 illustrates the annual power generation by source for the Northeastern region of Brazil from 2010 to 2018. However, it would enhance the relevance and currency of the research to include updated data until 2023 or 2022, considering the significance and the latest trends in renewable energy adoption.
4. The abbreviation ‘ORC’ in the introduction section should be introduced only during its initial usage.
5. The full term for 'HTF' should be presented at its first usage, followed by the abbreviation in subsequent references.
6. Prior to or following Equation 19, it is advisable to provide essential explanations about the ‘Annuity factor’ to help readers grasp its importance and necessity.
7. In the results section, there is a notable absence of discussion regarding the existing grid electricity price. It is recommended to perform a comparison of the calculated Levelized Cost of Electricity (LCOE) of CSP with the localized grid electricity price. This comparative analysis will contribute to a more comprehensive assessment of the feasibility and effectiveness of the CSP plant.