

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

Jahan Zeb Alvi<sup>1</sup>

<sup>1</sup> Jiangnan University

Potential competing interests: No potential competing interests to declare.

I want to express my gratitude for your valuable contribution to the field of renewable energy with your paper titled "Technical and Financial Viability of a 1 MW CSP Power Plant with Organic Rankine Module: Case Study for a Northeastern Brazilian City." Your in-depth analysis and insights provide valuable knowledge for the advancement of sustainable energy solutions. However, I have a few questions about it.

How does the efficiency of the ORC module impact the overall performance and cost-effectiveness of the CSP power plant?

Could you elaborate on the reasons for the relatively high levelized cost of electricity (LCOE) for the studied power plant compared to other regions and technologies?

What specific recommendations or suggestions are made in the paper for optimizing the solar field to reduce costs and improve performance?

How does the size and capacity of the Thermal Energy Storage (TES) system affect the overall feasibility and economics of the power plant project?

Can you explain how the power plant's stability throughout the year is determined and why it is considered an attractive feature for the system operator?

What key factors make the chosen region suitable for this CSP power plant project, beyond just direct normal irradiance and average temperature levels?

In terms of the distribution of energy, what are the main insights gained from the Sankey diagram presented in Figure 3, and how do they impact the overall operation of the power plant?