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.

A 1 MWe parabolic trough concentrating solar power plant using an Organic Rankine Cycle to convert thermal power into electricity was simulated. The novelty claimed is grouped in three key points: 1) the chosen location, that has not been studied previously, 2) utilization of a real commercially available ORC module for the power conversion and 3) the sizing of the solar field in function of the chosen ORC module in order to obtain the best configuration. Under this considerations, objectives and scope, the work is relevant to the field of thermal solar energy. With the aim to improve the manuscript the following comments should be addressed:

Nomenclature.

- HTF density (units are in kg/m and should be in kg/m3)

- annual operation and maintenance costs, symbol should be CO&M

- units for mass flow are kg/m3 and should be kg/s

Section 2.3

- “Heat losses in TES were considered to be too small, 0 W/K as in [17]” Instead this sentence, the proper consideration should be “Heat losses in TES were neglected, as in [17]”

Section 3.2 TES Cost.

- Second line, says “temperature of 142 ◦ presented” correct adding Celsius symbol.

Section 4. Figure 2.

- It seems that thermal stored energy is twice the incident solar energy, but considering Sankey diagram the stored heat is only 60.2% of the 54.8% of total incident solar energy. Please provide more information to avoid a misunderstanding in this regard.

General.

No comments about validation of the modeling procedure were provided in the manuscript, please indicate how authors

do validate energy and economic models.