

## Review Form 1.6

Journal Name:	<a href="#">Journal of Energy Research and Reviews</a>
Manuscript Number:	Ms_JENRR_86862
Title of the Manuscript:	<b>Thermal Performance Analysis of a Linear Fresnel Concentrating Solar Collector</b>
Type of the Article	

### **General guideline for Peer Review process:**

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<https://www.journaljenrr.com/index.php/JENRR/editorial-policy> )

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**PART 1: Review Comments**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Compulsory</b> REVISION comments	<p>General comments:</p> <p>(1) The author claims in the abstract that 'The thermal performance of a linear Fresnel solar collector system is investigated in this study'; in reality, only a single collector tube is studied.</p> <p>(2) The models used in the study are over simplified, to the extent that vital design parameters are overlooked.</p> <p>If the author is prepared to include statements to clearly write down the limitations of the study, this paper could still have values for readers. The recommended minimum revisions include:</p> <p>(1) Re-write Abstract, Introduction and Conclusion to satisfy (1) in the General comments above.</p> <p>(2) For Eq. (1) the outlet temperature is not an independent variable that can be set at any given value. For a given flow rate, the outlet temperature depends on the coolant's properties, the system's parameters, such as tube size, coolant-solid surface condition, and outside temperature. A statement must be made that considering the fluid flow of the system leads to such outlet temperatures. There are errors in Eq. (1): please define <math>m</math> as the mass flow rate. The subscript <math>M</math> does not have a meaning – it is better to use <math>L</math>, the length of the tube such that the statement 'at position <math>m = M</math>' in the present manuscript does not have any meaning: use at position <math>x = L</math> instead.</p> <p>In the overall design, the inlet temperature is not independent either. It depends on the outlet temperature of the turbine. Design of the turbine demands a particular temperature. Please include such a statement.</p> <p>(3) Please define all unused variables in Eq. (3) such as <math>f, v \dots</math>. Again, not all variables are independent in the calculation of pressure drop. It is well-known in heat exchanger design, that multi-pass is used to give high enough flow velocity so that expected heat transfer can be achieved. Conclusions made by author regarding flow and tube diameters could be misleading as they are dictated by system design requirement.</p>	
<b>Minor</b> REVISION comments	<p>(1) Please use a spell checker to correct the many typos, for example, the first line in Introduction:</p> <p>'Solar thermal energy is one of the most important sources of clean and renewable energy has great potentials in abating overdependence of the global economy'</p> <p>Solar thermal energy is one of the most important sources of clean <u>and</u> renewable energy and has great <u>potential</u> in abating the overdependence of <u>the</u> global economy</p> <p>(2) The heading 'Materials and method' has no meaning; please remove.</p> <p>(3) Change heading 'LINEARLY FOCUSING SOLAR THERMAL COLLECTOR' to 2.0 The mathematical models.</p>	
<b>Optional/General</b> comments	<p>The plots are produced from two simple equations. A lot of conclusions can be seen easily from an inspection of the equation themselves. Considerable explanations are needed to justify the conclusions.</p> <p>-</p>	

**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<b>Are there ethical issues in this manuscript?</b>	<b><i>(If yes, Kindly please write down the ethical issues here in details)</i></b>	

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**Reviewer Details:**

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