

## Review Form 1.7

Journal Name:	<b>International Journal of Environment and Climate Change</b>
Manuscript Number:	<b>Ms_IJECC_103986</b>
Title of the Manuscript:	<b>Design and Fabrication of Vapour Compression Refrigeration Cycle Based On Storage Type Domestic Water Heater</b>
Type of the Article	<b>Original Research Article</b>

### **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.journalijecc.com/index.php/IJECC/editorial-policy> )

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**PART 1: Review Comments**

	Reviewer's comment	Author's comment (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)
<p><b>Compulsory</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is the manuscript important for scientific community?</b> (Please write few sentences on this manuscript)</li> <li>2. <b>Is the title of the article suitable?</b> (If not please suggest an alternative title)</li> <li>3. <b>Is the abstract of the article comprehensive?</b></li> <li>4. <b>Are subsections and structure of the manuscript appropriate?</b></li> <li>5. <b>Do you think the manuscript is scientifically correct?</b></li> <li>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></li> </ol> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p> <p><u>Additional Points</u></p>	<p>Manuscript is important as it covers the importance aspect of energy conservation. However many aspects like aesthetics, manufacturing, materials, are not covered.</p> <p>Title says Design and Fabrication .... However Design lacks important information. The information which is not necessary like PH diagram, working of various components in the system is given. Attention towards fabrication is also not given.</p> <p>Abstract is not precise. Has to be improved.</p> <p>Subsections and structure are ok. However manuscript can be made more compact and precise.</p> <p>Manuscript is correct. But the author is failed to convince what is new in his work.</p> <p>Except one reference all other are prior to 2010. Whatever references are given, are not discussed properly in the introduction part. Author has to objectively point out the previous work in this area and research gap.</p> <ul style="list-style-type: none"> <li>• No need to explain condenser, evaporator, expansion valve</li> <li>• Design, selection of material and manufacturing should have a separate section.</li> <li>• Figure 3 is very faint</li> <li>• Table 2: Time duration to be replaced by Time of the day</li> <li>• Should write something about instrumentation</li> <li>• No need to give details of COP calculations</li> <li>• Maintenance and space requirements to be discussed</li> <li>• 104 ltr water is available throughout the day. However hot water requirement is mostly in the morning say 7 to 9 am. This is going to change the payback calculations</li> <li>• Figure 1: No need to show each component; just show the cycle with components</li> <li>• Figure 2: Drawing of condenser dimensions but no dimensions are shown</li> <li>• Electrical resistance heating costing details are not presented</li> <li>• No discussion on figures 5 and 6 presented</li> <li>• Insulation of heater and heat losses</li> <li>• LPG cylinder cost is changed</li> </ul>	
<p><b>Minor</b> REVISION comments</p> <ol style="list-style-type: none"> <li>1. <b>Is language/English quality of the article suitable for scholarly communications?</b></li> </ol>	<p>The language is ok but many grammatical corrections to be done. Use of some packages like Grammerly recommended</p>	
<p><b>Optional/General</b> comments</p>	<p>The author has to incorporate all the comments and revise the manuscript. Then only the editors should think about acceptance</p>	

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**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>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

**Reviewer Details:**

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Department, University & Country	<b>India</b>