

Review Form 1.7

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_109663
Title of the Manuscript:	Intelligent Energy Management System: Harnessing Fuzzy Logic for Charge Control
Type of the Article	Original Research Article

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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><u>Compulsory</u> REVISION comments</p> <p>1. Is the manuscript important for scientific community? (Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable? (If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p>	<p>1. Yes, the manuscript makes some important contributions that would be of interest to the scientific community working in the areas of renewable energy systems, power electronics, and control systems. It proposes a new approach for solar charge controller design using fuzzy logic theory. This can help advance innovation in photovoltaic system technologies.</p> <p>2. Yes. Clear & precise.</p> <p>3. Yes, the abstract provides a comprehensive summary that covers all the key components of the research. However, avoid to use 'We' in the abstract.</p> <p>4. Yes. Suggest to separate the section for Introduction and Methodology (from modeling Modeling Photovoltaic Systems onward)</p> <p>5. Yes. The manuscript presents scientifically sound and valid research: -The photovoltaic system models align with well-established mathematical representations cited from published literature. The equations and solar panel specifications seem physically and technically correct. -Implementing the system simulation in MATLAB/Simulink leverages a trusted scientific programming environment used widely in academia and industry. The fuzzy logic control methodology is also documented in prior peer-reviewed studies</p> <p>6. The references are sufficient and adequately recent to support the manuscript. Suggest to add on this paper:L. M. D. P. Bandara, D. S. Wijerathne, W. D. M. J. D. Wickramasinghe, D. S. Vidanagama, and P. A. S. P. Jayathilake, "Adaptive Fuzzy Control for MPPT in PV Systems," 2022 IEEE 12th International Conference on Adaptive Science & Technology (ICAST), 2022, pp. 1-6, doi:10.1109/ICAST54721.2022.9783205.</p>	
<p><u>Minor</u> REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>	<p>Yes.</p>	
<p><u>Optional/General</u> comments</p>	<p>1. Add on the future work in Conclusion part.</p> <p>2. Change Figure 1 to Fig. 1 (Fig 1: Equivalent circuit of a PV cell)</p> <p>3. Inconsistency of using wording "MATLAB/Simulink". Sometimes using 'matlab/simulink'. Recheck.</p>	

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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

Reviewer Details:

Name:	Ts Azahari Bin Salleh
Department, University & Country	Universiti Teknikal Malaysia Melaka, Malaysia