

# Review of: "The Application of PROMETHEE with the recalculated weight method as a more accurate measurement for the selection of the best Hybrid Renewable Energy Technology for a slum building"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

## **Reviewer comments**

1. Literature review is not clearly conducted. It should be extended and explained briefly. Kindly include more references in the literature review portion.
2. Research gaps from the previous works are also not highlighted properly. Novelty is also missing.
3. Objectives of the research work should be refined and stated clearly. I didn't get the primary objective of this article, to select the proper hybrid renewable energy or to prove that the recalculated weight technique is more accurate than other methods. Which one?
4. What is the reason for adopting PROMETHEE as a ranking tool when lots of other recently developed potential MCDM tools are available? Not justification is provided. Same justification is needed for using AHP, FAHP, CRITIC and Entropy. What are the advantages of using these particular techniques?
5. The range of  $\alpha$  in equation (31) varies from 0 to 1, but what is the value of  $\alpha$  taken for this particular case? Not mentioned. If it is 0.5, then the calculated combined weights shown in table 16 are wrong.
6. What does d and n represents in equation (32)? What are their values?
7. The author only considers only two cases during combined weights calculation i.e., AHP/Entropy and FAHP/CRITIC. What about AHP/CRITIC and FAHP/Entropy? The author should consider all the four cases and make comparisons.
8. I request the author to kindly maintain a uniform round off rule throughout the manuscript. Somewhere four decimal place is taken, in some places up to five or six decimal place are considered.
9. Add a separate conclusion section at the end of the manuscript and highlights the key concluding remarks in bullet points.
10. What are the limitations of the following study? How this research can be extended in future?
11. The overall integrated objective weights using bayes theorem in Table 12 are wrongly evaluated, and similarly, the final recalculated weights in table 13 will be wrong automatically, hence the rankings may get changed. Therefore, it is requested to recheck the calculations once. The overall integrated subjective weights are ok. The calculations are shown below for the objective weights. Rectify me if I am wrong.

Criteria	CRITIC weights (C)	Entropy weights (E)	C*E	Overall integrated objectives weights
C1	0.401471	0.034	0.013650014	0.126668116
C2	0.069641	0.7552	0.052592883	0.488046491
C3	0.0550459	0.055	0.003027525	0.028094537
C4	0.04909956	0.0696	0.003417329	0.031711812
C5	0.04908774	0.0695	0.003411598	0.031658626
C6	0.0467505	0.0196	0.00091631	0.008503085
C7	0.049216	0.3659	0.018008134	0.167110192
C8	0.080038	0.0534	0.004274029	0.039661734
C9	0.0822414	0.0274	0.002253414	0.020911023
C10	0.1174064	0.0529	0.006210799	0.057634384
		<b>SUM</b>	0.10776204	1