

Review Form 1.6

Journal Name:	Journal of Energy Research and Reviews
Manuscript Number:	Ms_JENRR_69982
Title of the Manuscript:	Performance Evaluation of 780 Wp rooftop Solar PV Power Backup System in Western Kenya
Type of the Article	Original Research 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:

(<http://peerreviewcentral.com/page/manuscript-withdrawal-policy>)

Review Form 1.6

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)
Compulsory REVISION comments		
Minor REVISION comments	<p>The Paper is well written, however minor revision has to be done for better flow by including the below information.</p> <ol style="list-style-type: none"> 1. In Fig.2, in the month of June the irradiance is 480.5 W/m² but Fig-3 shows 793 W/m² (14th June 2020) which needs to be clarified. 2. Fig-3 shows good and bad day as 22nd Feb 2020 and 14th June 2020. If same dates that are considered in Fig.2 are considered for I-V characteristics, validation of data becomes easy and acceptable instead of 19th March 2020 and 26th May 2020 respectively. 3. In Equation 9 and 10, The Gt values are 1095 and 606 W/m² are considered and it was not mentioned for which dates it is considered. Preferably the data on two days if considered 22nd Feb 2020 and 14th June 2020 will be better for analysis. Also, temperature on these specific days to be mentioned 4. In Equation 9 and 10 substitutions of Vmax and Imax position is wrong. It should be 28.05V *5.82A and 20.16V * 5.07A respectively. 5. Replace the word Field factor with Fill factor after Equation 10 line 6. Equation 11 should be written as 28.05V *5.82A instead of 5.82 * 28.5 7. In equation 11 and 12, information related to obtaining of Voc and Isc values is not mentioned. Moreover, as per panel rating the Isc value cannot be 35A and Voc on good day cannot be 8V. The author needs to relook into these values 8. In conclusion <ol style="list-style-type: none"> i) Units of irradiance has to be 1200 Wm⁻² in place of 1200Wm⁻¹ ii) In table-2 Energy output is highest in the month of March but it is shown as February. Similarly, the lowest occurred in January but it is mentioned as June iii) Yearly average yield has to be 4.09 kWh/kW to 5.46 kWh/kW in place of 4.43 kWh/kW to 5.46 kWh/kW iv) Information about battery performance and efficiency is missing v) It is better to have different tilt angles based on seasons to improve the array efficiency. 	
Optional/General comments		

PART 2:

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

Reviewer Details:

Name:	Madhu Palati
Department, University & Country	BMS Institute of Technology, India