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| Journal Name: | Journal of Energy Research and Reviews |
|--------------------------|--|
| Manuscript Number: | Ms_JENRR_51083 |
| Title of the Manuscript: | Design of Stand-Alone Solar-Wind-hydro based Hybrid Power System: Case of rural village in Malawi. |
| Type of the Article | Original Research Article |

General guideline for Peer Review process:

This journal's peer review policy states that <u>NO</u> manuscript should be rejected only on the basis of '<u>lack of Novelty'</u>, 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://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline)



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PART 1: Review Comments

| | Reviewer's comment | Author's comment (if agreed highlight that part in the manual |
|-------------------------------------|---|---|
| | | his/her feedback here) |
| <u>Compulsory</u> REVISION comments | Abstract: i. NASA ? full meaning? | |
| Minor REVISION comments | Introduction: i. The road map for Africa encourages rural electrification because Africa is home to the largest unelectrified population in the world, with about 600 million people lacking access, expected to reach 700 million by 2030. Make this statement a clear as possible ii. The main challenge with one energy source such as solar photovoltaics is during the night and when there is no sun. please amplify the challenge iii. The fact that renewable energy sources are also distributed sources offers an opportunity to save on the capital investment for the transmission and distribution of electricity. please recap iv. Since most common hybrid systems are associated with two systems then combining all the three systems (wind, hydro and solar) the output is expected to be much greater than the two stage hybrid systems. Please recap v. Figure which figure?? | |
| | Materials and methods: rainy season (December, January, February and March) please double check if Dec – March is rainy season in Dwangwa <i>Figure 1: The daily load profile for the study site</i> Name the site Figure 2: Configuration of the system in HOMER definition of terms in the diagram?? iv. The monthly averaged value for Global horizontal radiation were obtained for a period of 22 years from July, 1983 to June, 2005 please recap v. July, 1983 to June, 1993 no current data?? vi. <i>Figure 3: Monthly average wind speed in Dwangwa</i> what year? vii. Figure 4: Wind power curve of Generic 10 kW wind turbine what year? viii. The cost reduction for a wind turbine is around 12% between 2015 and 2025 is this an estimate?? ix. The efficiency for the turbine was assumed to be 90%. Why is the efficiency less than 100%?? x. Reference citation in the text is not consistent | |
| | Results and discussion: Systems Optimization and Selection of Scenarios be consistent with presentation of headings constraint values what are these values?? during no sun recap the results were not compared with other scholarly works The battery state of charge in figure 18 indicate that the month of September, storage was heavily used by the load which is evidenced by low hydropower capacity due to low water levels please recap and be sure that the battery is | |

eed with reviewer, correct the manuscript and anuscript. It is mandatory that authors should write

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| already in use | |
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| Great contribution. A little extra work, especially on the results section, will enhance the quality of this manuscript. | |

PART 2:

| | | Author's comment (if agreed w that part in the manuscript. It is r feedback here) |
|--|---|---|
| Are there ethical issues in this manuscript? | (If yes, Kindly please write down the ethical issues here in details) | |

Reviewer Details:

| Name: | F. J. Owuna |
|----------------------------------|--|
| Department, University & Country | Usmanu Danfodiyo University, Sokoto, Nigeria |

l with reviewer, correct the manuscript and highlight s mandatory that authors should write his/her