

Review Form 1.6

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_90459
Title of the Manuscript:	Development of an intelligent smart hub renewable generation system (ISHRGS) for both urban and rural centres in Offa, Kwara State
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:

(<https://www.journaljerr.com/index.php/JERR/editorial-policy>)

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	<ol style="list-style-type: none"> 1) On page 1, the phrase "Infrastructure and information technologies improved the education level of an area" should be reformulated since is unclear which area was improved by the education level. 2) On page 1, should be checked or replaced the term "cool" from the "cool medicine". 3) On page 1, referring to the phrases "Nevertheless, worldwide more than 1 million people lived without electricity in 2016. That is about 14% of the world's population [1]." should be checked the reference from where these comments were put since these comments cannot be found in reference [1]. 4) On page 2, "Hybridge Systems (HS)" should be replaced with "Hybrid Systems (HS)". 5) On page 2, referring to the phrase "However, an intelligent smart hub renewable generation system can quickly be developed." should be given a time estimation instead of expressing it in a general way as "quickly". 6) On page 2, should be checked and reformulated the comment "...can improve the livelihood of billions worldwide" because the subject is missing. 7) On page 2, in the phrase "According to (et., al),..." should be put the surname of the first author near et al. and the corresponding number of the reference. 8) On page 2, in the phrase "...introducing sensors and software..." should be given some examples of the types of the needed software. 9) On page 2, the phrase "At times may be expensive during day time and cheap at the time." should be reformulated as "...cheap at the night time." 10) For all figures from the manuscript should be added references in the caption of figures and in the place of the manuscript where the figures are mentioned. In the case the figures were copied from the literature articles with copyright protection, the authors should get the right and permission to use the figures from the publishers or through Copyright Clearance Center's RightsLink service, and should specify it in the caption of the respective figures. 11) On page 2, the phrase "According to Bertolini study investigate..." should be reformulated since is unclear, and the reference number should be added as [4], according to the references provided in the manuscript. 12) On page 3, Figure 1 and Figure 2, in the bottom legend "Demand (Meggawatts)" should be replaced with "Electricity Demand (Megawatts)". The caption of these two figures should be detailed since in this form looks similar. In Figure 2, the final hour should be 24 instead of 22. 	

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<p>Compulsory REVISION comments</p>	<p>13) On page 4, after (Okereke, 2017) and (Sambo, 2018) should be added the corresponding reference number. Moreover, in the references provided in the manuscript cannot be found these references (Okereke, 2017) and (Sambo, 2018), and therefore the references should be completed with these references.</p> <p>14) On page 4, in the phrase “However, the study considers sunlight, wind, plant residual and water as renewable energy systems: the research project targets environment, engineering, economy, and social and geographical factor.” should be clarified the name, the number and the responsible of the research project.</p> <p>15) The abbreviations (e.g. SH, ISHRGS) should be explained only once in the first place where appear in the manuscript not in multiple places.</p> <p>16) On page 7, the phrase “The intelligent smart hub seen in fig 4 shows that the intelligent smart hub generation system (ISHGS) gains the same direction as previously given in figure 4.” should be reformulated since is unclear, and also should be avoided the using of the same words in one phrase.</p> <p>17) On page 8, in the caption of Figure 5: Mmetering system of SH, and the microcontroller controls, the word “Mmetering” should be replaced with “Metering”, in figure should be replaced “AC Soruces” with “AC Sources”, and a more visible image at a higher resolution should be provided instead of the actual image (Figure 5).</p> <p>18) On page 9, in the image of Figure 6 should be replaced “Substaion” with “Substation”.</p> <p>19) On page 10, the Source: Sunday et al., (2018); Idemudia and Nordstrom (2018) should be deleted from below the table and the reference numbers should be added at the end of the caption of Table 1 Network and no-network solutions in Offa rural and urban distribution planning as [25] and [...] for Idemudia and Nordstrom (2018) that should be added in the references since it is missing.</p> <p>20) On page 10, the phrase “Numerous Federal and State Government Ministries, Departments, and Agencies (MDAs), as well as confidential area players, have coordinated projects to help carry out different sustainable power innovation projects sooner rather than later.” should be reformulated since is too general and is unclear at which innovation projects the authors refer and “sooner rather than later” should be explained in terms of time duration or should be deleted this part of the comment.</p> <p>21) On page 10, should be added references for the quantitative data used in the phrases “Some of the goals for renewable energy sources at the national level are achieving 15% and 20% commitment of hydro to the country's power. It is blended between 2015 and 2020 individually, gaining a 1% commitment of wind and sun oriented separately to the power age blend by 2022, guaranteeing substitution of half of the kindling consumed with biomass energy innovation by 2020 and use of biomass assets to get power age limit of 1000MW.”</p> <p>22) On page 12, the Source: Locally retrieved Data from off District Control Unit should be deleted from below the table, and the reference numbers should be added at the end of the caption of Table 2. Comparative Energy Consumption of Some Selected Countries as at 2015. However, the data are very old (2015) and data from the recent years (e.g. in the time period 2020 – 2022) should be provided.</p> <p>23) On page 11, should be added references for the quantitative data used in the phrases “Table 2 shows the historic development of an renewable generation system in the region of Kwara State include Offa community (Rural and Urban centres) and of the selected peer districts in Offa. It is observed that Essa District performed worst of the five LGA in Kwara State in terms of absolute electricity generation system. Over a 10 year period, there was an increase of 73% in mainline generating capacity in Kwara State and neighbourhood communities in Offa. By contrast, Balogun District, Ojomu North-West, Ojomu South-East district in Offa ramped up its electricity production by 322% and Shawo East, Ojomu South-East even by 421%. As a result, Ojomu North-West generated almost twice as much electrical energy in from 2002 to 2022 as Offa only has control Station in shown in figure 5.”.</p> <p>24) On page 11, the caption of Table 2. Comparative Energy Consumption of Some Selected Countries as at 2015 should be corrected because the study refer to the Offa district from a single country (Nigeria) not from different countries. In the columns of Table 2 should be performed the following changes: “Offa distric” should be replaced with “Offa district”, and “kwh” should be replaced with “kWh”.</p>	
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Review Form 1.6

	<p>25) On page 12, the Source: Oyedepo et al., (2018) should be deleted from below the table, and the reference number [25] should be added at the end of the caption of Table 3. Renewable Energy (RE) Potentials in Offa centres. The name of the column "Review" should be clarified because is not clear which is the difference between the previsions for the "Target" column and the last column, as well as who made the previsions in these two columns, and which is the duration of the previsions. "1.0 kWh/m² /day – 6.5kWh/m² /day" should be written as "1.0 – 6.5 kWh/m²/day"</p> <p>26) On page 13, in the Conclusions section, the comment "as we as the long-time problem" is unclear and the corresponding phrase should be reformulated.</p>	
Minor REVISION comments	The sections should be numbered as 1, 2 no 1.0, 2.0. (e.g. 1. Introduction instead of 1.0 Introduction)	
Optional/General comments	English Grammar should be checked throughout the manuscript. The authors can use the Grammarly Basic software, which is cost free.	

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>	

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