



SDI Review Form 1.6

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| Journal Name:            | <a href="#">Current Journal of Applied Science and Technology</a>             |
| Manuscript Number:       | Ms_CJAST_37201                                                                |
| Title of the Manuscript: | ESTIMATING THE EFFECT OF LOADSHEDDING ON OUTAGE RATE IN A LOW VOLTAGE NETWORK |
| Type of the Article      | Original research paper                                                       |

**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://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 with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <b>Compulsory</b> REVISION comments | <p>What is <math>A_{LS(min.)}</math> and <math>A_{LS(max.)}</math>?<br/>The presented calculus are formally incorrect because:<br/><math>24 - \frac{6-10}{24}</math> is not equal to <math>1-(0.25-0.42)</math>. The first result is 24.17 and the second one is 1.17.<br/>For other hand (0.75-0.58) it is not the same as <math>1-(0.25-0.42)</math>. The first result is 0.17 and the second one 1.17.<br/>(0.75-0.58) is not the same as (0.58-0.75). The first result is 0.17 and the second one - 0.17.<br/>When you subtract a time from a percentage, no physical meaning is given to the equation. At the end you have a time or a percentage?</p> <p>Please explain how <math>A = 1 - \frac{Mean(OD)}{0.58*OP}</math>? Previously you have defined on equation 3 A as being <math>A = 1 - \frac{Mean(OD)}{OP}</math>. The same questions are applied to the equation 6.</p> <p>The data in table 1 (Table 1: Summary of Outage Occurrences and Categories (January-December, 2011)) is completely different from the data on table 2 (Table 2: Summary of Outage Duration and Categories (January-December, 2011)), but they have the same name. It is impossible to understand their meaning. Explain carefully the data presented there.</p> <p>Data was treated without any discussion on figure 1 and figure 2.</p> <p>No statistical treatments were made, only were used descriptive statistics. For a scientific paper, another tools like the distribution function or the probability function for power outages, voltage drop, or load shedding are needed.</p> <p>The conclusions on the manuscript are very poor. Taking in account the title an estimate is needed.</p> | <ul style="list-style-type: none"> <li><math>A_{LS(min.)}</math> – Availability at minimum load shedding</li> <li><math>A_{LS(max.)}</math> – Availability at maximum load shedding</li> <li><math>24 - \frac{6-10}{24}</math> The “-” between sign between 6 and 10 is not minus as assumed by the reviewer but mean ranges between 6 and 10 hours.</li> <li>(0.75-0.58) is the same as (0.58-0.75), it is a range of factors determined from the calculation. The lower value was only interchanged with the higher value.</li> <li><math>A = 1 - \frac{Mean(OD)}{OP}</math> became <math>A = 1 - \frac{Mean(OD)}{0.58*OP}</math> after the worse case factor of 0.58 derived from the calculated range was applied to the observation period(OP) to note the effect of load shedding on hours of supply availability and outage rate.</li> <li>Table 1 contains frequency of outage occurrence while Table 2 contain duration of outages for each category of fault. The data on each table must therefore be different.</li> <li></li> </ul> |
| <b>Minor</b> REVISION comments      | <p>It is proposed to use the terms “Load Shedding” instead of “Loadshedding” in all manuscript, including the title.</p> <p>The first time that an acronym is used their meaning must be explained. When the author or authors said “...LV network in Ado-Ekiti”, they must say “...Low Voltage (LV) network in Ado-Ekiti...”.</p> <p>When we read “outages analyzed are No supply (46.7%) and Low voltage”, we must read “outages analysed are “no supply” (46.7%) and “Low voltage””, if the intent is to give emphasis to the occurrence of “no supply” and “low voltage”.</p> <p>When we read “defects, lighting, vandalization, poor maintenance etc.”, we must read “defects, lighting, vandalization, poor maintenance, etc.”.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>Corrected</li> <li>Corrected</li> <li>Corrected</li> <li>Corrected</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |



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|                                  | <p>When we read “As Distribution Systems are growing large..”, we must read “As distribution systems are growing large...”.</p> <p>When we read “From the analysis, Availability and outage rates were”, we must read “From the analysis, availability and outage rates were”.</p> <p>When we read “A and <math>\lambda</math> were evaluated as in Equations 3 and 4:”, we must read “A and <math>\lambda</math> were evaluated as in Equations 3 and 4 (Zeltex, 2004):”. The mention to Zeltex, (2004) after the equation 4, should be removed.</p> <p>When we read “Meanwhile, loadshedding scheme on the HV side of the”, we must read “Meanwhile, load shedding scheme on the High Voltage (HV) side of the”.</p> <p>Please rewrite the sentence “There are four 11kV feeders in the township which are being rotated every 4hours with 2No feeders ON at a time during peak period between 6.00am - 8.00pm and 3No feeders on during off-peak period between 8.00pm and 6.00am.” in order to any reader understand it.</p> | <ul style="list-style-type: none"> <li>• Corrected</li> <li>• Corrected</li> <li>• Corrected</li> <li>• Corrected</li> <li>• Corrected</li> </ul> |
| <u>Optional/General</u> comments |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                   |