Low Voltage Reliability Equivalent Using Monte-Carlo Simulation Technique

Noorfatin Farhanie Mohd Fauzi 1, Nur Nabihah Rusyda Roslan 1 and Mohd Ikhwan Muhammad Ridzuan 1

1 Faculty of Electrical & Electronics Engineering, Universiti Malaysia Pahang, 26600 Pekan, Pahang, Malaysia

Abstract:
Reliability is the ability of system to supply continuous electricity to customer ends with zeros fault occurs under specific a period. Most of the literature focuses more on medium voltage (MV) and high voltage (HV) compared to the low voltage (LV) due to a general absence of exact data in LV network and sizing of LV network. Plus, an increase in sizing, making the LV network becomes complex and difficult to assess. Therefore, in this research, the performance of reliability in LV network will be evaluated in detail network model. To reduce simulation time, methodologies of reducing detailed network into an equivalent network is introduced. This equivalent network is obtained by simplified the complex network by using Monte-Carlo Simulation technique. The results in this research are quantified and compared in reliability indices; SAIFI, SAIDI and CAIDI between these detailed and equivalent networks.

Keywords: Optical Sensor; Bulb Intensity

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