

INTISARI

Dalam mengoperasikan sistem jaringan distribusi faktor kehandalan sangat penting. Oleh karena itu, parameter yang dapat dijadikan acuan dalam mengetahui keandalan penyaluran energi listrik yaitu dengan menghitung indeks jumlah rata-rata gangguan sistem selama setahun yaitu SAIFI (*System Average Interruption Frequency Index*), indeks durasi rata-rata gangguan sistem selama setahun yaitu SAIDI (*System Average Interruption Duration Index*), CAIDI (*Customer Average Interruption Duration Index*), ASAI (*Average System Availability Index*), ASUI (*Average System Unavailability Index*).

Berdasarkan analisis dan perhitungan didapatkan bahwa nilai kehandalan sistem distribusi tenaga listrik di Gardu Induk Tambun. Penyulang Datsun, penyulang Morris, penyulang Mustika Jaya, penyulang Honda, penyulang Kp Utan dan penyulang Lambang Sari dikategorikan kurang handal karena nilai SAIFI lebih besar dari standar IEEE. penyulang Lexus, penyulang Morris, penyulang Mustika Jaya, penyulang Lambang Sari dikategorikan kurang handal karena nilai SAIDI lebih besar dari standar nilai IEEE.

Untuk kinerja rayon, Rayon Bantar Gebang, Rayon Mustika Jaya, Rayon Tambun dengan penyulang (*feeder*) yang ada di Gardu Induk Tambun mempunyai nilai SAIFI dan SAIDI lebih besar dari standar nilai WCS dan WCC. Hanya Rayon Prima yang memenuhi standar nilai kinerja SAIFI dan SAIDI WCC dan WCS.

Kata Kunci : Kehandalan, SAIFI, SAIDI, CAIDI, ASAI, ASUI.

ABSTRACT

In operating system distribution network reliability is very important factor. Therefore, parameters that can be used as references to determine the reliability of distribution of electrical energy is to calculate the index average number of system disturbances during the year ie SAIFI (System Average Interruption Frequency Index) , an index of the average duration of system disturbances during the year ie SAIDI (System Average Interruption Duration Index) , CAIDI (Customer Average Interruption Duration Index) , ASAI (Average System Availability Index) and Asui (Average System Unavailability Index).

Based on the analysis and calculations showed that the value of reliability of the electricity distribution system in the Tambun substation. Datsun feeder, Morris feeder, Mustika Jaya feeder, Honda feeder, Kp Utan feeder and Lambang Sari feeder considered less reliable because SAIFI value greater than the standard IEEE. Lexus feeder, Morris feeder, Mustika Jaya feeder and Lambang Sari feeder considered less reliable because SAIDI value greater than the standard value of IEEE.

For performance rayon, Rayon Bantar Gebang, Rayon Mustika Jaya, Rayon Tambun by feeder in the Tambun substation SAIFI and SAIDI has a value greater than the standard value of WCS and the WCC . Only Rayon Prima that meet the standards of performance SAIFI and SAIDI value WCC and WCS.

Keyword : Reliability, SAIFI, SAIDI, CAIDI, ASAI, ASUI.