RELIABILITY ANALYSIS OF TRANSFORMERS SUBSTATION IN PROBOLINGGO AREA USING MONTE CARLO METHOD

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ABSTRACT

In this Final Project, the analysis were done for the reliability of transformer substations in the Probolinggo area. The aim of this Final Project was giving the additional evaluation to PT PLN (Persero) which is a national power provider. In this reliability analysis were used some methods including data collection, data processing, and reliability analysis. Furthermore the values were compared with the WCS (World Class Service) standard values as well as the reliability standards in PT.PLN (Persero).

The results show that the transformers in the substations of Probolinggo area were likely have a good reliability, with the average of SAIFI 1.57 times/year and SAIDI 34.98 minutes/year. Although there were several substations which did not meet the standards, but it could be improved by better care. Also there were some substations with minimal disruption which could not be analyzed by the Monte Carlo method, such as Bondowoso Substation, Kraksaan Substation, Tanggul Substation, and Bangil Substation. It could be concluded that the service has been good.

Keywords: Reliability, Transformers, Substation, Monte Carlo
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