

ANALYSIS OF MEDIUM VOLTAGE NETWORK RELIABILITY 20 KV IN THE FEEDER BAGBAGAN AT PT PLN (PERSEO)

RAYON PALABUHANRATU

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ABSTRACT

The electrical power supply, the level of reliability Medium Voltage Networks (MVN) is necessary because this is a factor that affects the distribution of electrical energy to the consumer. Today's world of technology both industry and households is growing, especially for a country of Indonesia has a high population density, one of them in the area Palabuhanratu then it takes the energy supply and distribution of reliable and in accordance with the standards of reliability PLN. This thesis will discuss the evaluation of the reliability of medium voltage 20 kV network PT. PLN (Persero) Rayon Palabuhanratu. As the case studies in the analysis is the reliability of medium voltage 20 kV network in the feeder Bagbagan 2015 at Rayon Palabuhanratu. The method used in the analysis is a method of FMEA (Failure Mode and Effect Analysis) and Section Technique where this method will calculate Reliability Index SAIFI and SAIDI based failure rate and average repair as well as the number of consumers at every point of load (loadpoint). The results compared well with the reliability index SPLN 59: 1985 is equal to 2.14 times / year. For feeder SAIDI value has been below the maximum value, reliability index ie below PLN 12.842 hours / year.

Keywords: Reliability, Medium Voltage Networks, FMEA, Section Technique, SAIFI, SAIDI