

THE ANALYSIS OF THE REPLACEMENT INFLUENCE IN NGGORANG FEEDER TOWARD THE POWER EFFICIENCY AT PT PLN (PERSERO) LABUAN BAJO NUSA TENGGARA TIMUR CUSTOMER SERVICE UNIT

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ABSTRACT

Electrical energy is one of the basic needs to support all activities both for personal and commercial purposes. In Labuan Bajo, the need for electricity increase every year. The consumers' demands on quality service in electric power services at PT. PLN (Persero) must be able to provide sustainable electricity supply with good quality power to its consumers. The purpose of this research is to find out the length of conductor for new conductors and to find out the percentage ratio caused by the reduced power efficiency by the MVTIC conductor. Meanwhile, the literature study research method was used to find a general description of the network used by PLN. The literature study showed specifications of the introduction of AAAC and MVTIC. These specifications were used to calculate the total resistance. The literature study also obtained rules for calculating power losses caused by conductors. For the length of the AAAC and MVTIC conductors for Nggorang feeders was similar, namely 142290 m. For the length of conductor per wicket is the same that is 52.7 m while the efficiency for the conductor of AAAC is 99.52%, and for MVTIC is 99.46%, the power loss on the AAAC conductor is 493.26 watt for the MVTIC conductor of 533.88 watts.

Keywords: *Electric Energy, PLN (Persero), Power efficiency, Nggorang feede*

