RECONFIGURATION OF THE PRIMARY DISTRIBUTION NETWORK OF PT PLN (PERSERO) BORONG CUSTOMER SERVICE UNIT, FLORES TO REDUCE POWER LOSS.

MUHAMAD IRFAN
Electrical Engineering Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : muhamad.irfann02@gmail.com

ABSTRACT

Power loss and voltage drop are problems that occur in electric power systems. Both of these are influenced by several parameters including the current resistance and reactance of the feeder. Because of these things, it can be done network reconfiguration to minimize these losses. The results of this study present the reconfiguration of the Peot feeder and the Waerana feeder at Borong Diesel Power Plants and Borong Substations using Etap Software. Research on the reconfiguration of Peot feeders using open switches 5, 6, 10, 12 results in a power loss of 1662.3 KW and a reactive power of 4335.2 KVAR, with a percentage decrease in active power losses of 25.92%, power loss reactive 16.62%. The results of the reconfiguration of the Waerana feeder obtained open switches 6, 10, 22, 23, 32 the results of the open switches obtained a power loss of 1369.2 KW and a reactive power of 5528.8 KVAR, with a percentage reduction of active power losses of 14.74% , the reactive power loss is 5.91%. Poor selection of tie switches during reconfiguration will exacerbate the resulting power losses.

***Keyword** : Power Loss, Distribution Network, Feeder*