ABSTRAK

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Analisis *drop* tegangan dan rugi-rugi daya pada jaringan tegangan menengah 20 kV PT. PLN UP3 Banten Utara

Drop tegangan dapat mengganggu sistem beban karena tegangan yang diterima akan lebih rendah dari tegangan yang dikirim, sedangkan rugi-rugi daya merugikan sisi konsumen dan sisi perusahaan penyediaan listrik karena daya yang diterima dan daya yang terjual akan lebih rendah. Terdapat tiga *feeder* yang diteliti yakni *feeder* Polda Serang, *feeder* Kota Serang, dan *feeder* Bhayangkara Serang. Total *drop* tegangan saat kondisi *existing* pada *feeder* Polda Serang sebesar 6,497%, *feeder* Kota Serang sebesar 8,003%, dan *feeder* Bhayangkara Serang sebesar 3,289%. Setelah dilakukan perbaikan, total *drop* tegangan pada *feeder* Polda Serang turun menjadi 5,381% dan *feeder* Kota Serang turun menjadi 4,524%.

Kata kunci: *feeder, drop* tegangan, rugi-rugi daya, *existing*

ABSTRACT

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Analysis of voltage drop and power losses of 20 kV power distribution PT. PLN UP3 North Banten

Voltage drop can disrupt the load system because the voltage on the receiving side will be lower than on the sending side. At the same time, power losses can harm consumers and electricity supply companies because the power received and the electrical energy sold will be lower. The Polda Serang feeder, Serang City feeder, and Bhayangkara Serang feeder are the three feeders that were studied. The total voltage drop in the existing condition at the Polda Serang feeder is 6.497%, the Serang City feeder is 8.003%, and the Bhayangkara Serang feeder is 3.289%. After repair, the total voltage drop at the Polda Serang feeder decreased to 5.381% and the Serang City feeder decreased to 4.524%.

Keywords: feeder, voltage drop, power losses, existing