

ABSTRACT

Electric power is one of necessities in which most people from various regions in Indonesia require. The increase in needs of electric power happens each year together with economic development, numbers of population growth, and ongoing development plans in the present and in future as well.

This research was conducted to know the capacity of transformer 150 kV at Purworejo substation in the next 20 years, to the extent that it could be expected to take into consideration in operation at substation. Method applied in this research is Multiple Linear Regression (MLR) model.

The evaluation of transformer capacity on this research uses data, during 2010 to 2015, of peak load, population growth, and Gross Regional Domestic Product (GRDP). Besides, the data of current of feeder load at Purworejo – Kutoarjo substation is required to Feeder Reconfiguration scenario.

Feeder reconfiguration scenario aims to transfer a load from transformer which has a heavy load to another transformer which has a light load or an optimal load. If transformer operates in heavy load, it will produce overheat that causes real power losses on transformer.

Keywords: Substation, Transformer, Feeder Load, Multiple Linear Regression