

## **ABSTRACT**

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Study Program : Electrical Engineering  
Title : Distribution Transformer Capacity Planning According to  
Electrical Power Needs at the Mugar Sari Campus,  
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*Siliwangi University is currently building a second campus in the Mugar Sari Tasikmalaya area. With the construction of this second campus, it is necessary to plan the distribution transformer capacity in accordance with the installed electrical power requirements. In terms of designing electrical installations and the need for electrical power to be installed, proper planning is needed. In this research, the distribution transformer capacity value planning has been carried out in accordance with the installed electrical power requirements by considering load characteristics, namely demand factors and diversity factors. The aim of this research is to determine the capacity of the distribution transformer along with an analysis of the distribution transformer loading so that it complies with PLN standards. The total installed load is 1,566 kVA. This research was carried out using three methods. The distribution transformer capacity with method 1 is 1,220 kVA (1,250 kVA), method 2 is 1,188 kVA (1,250 kVA), and method 3 is 522 kVA (500 kVA). The loading percentage for method 1 is 81%, method 2 is 79%, and method 3 is 87%. The loading percentage value above is still in accordance with the 2020 Electricity Planning Projections through RUPTL, namely distribution transformer loading is limited to 70% to 90%.*

*Keywords: Distribution Transformer, Electric Power, Transformer Loading*