

## **ABSTRACT**

*The need for electricity for industry, offices, as well as the general public and individuals is greatly increasing. However, this increase in electricity demand is not accompanied by an increase in electricity supply.*

*The decreasing supply of electrical energy in Indonesia has become a problem in human life, because electricity is very important for human life. To reduce the shortage of electrical energy supply, the use of renewable energy is very important, such as utilizing the construction of PLTS. And in this case, the use of PLTS installation will be carried out at a Base Transceiver Station (BTS) located in the Kalimantan region, Putat Durei village, where the area experiences a shortage of electricity supply from PLN. A BTS is a system that works to provide working information signals. for 24 hours. Therefore, in this thesis we will discuss the design analysis of PLTS using the Off Grid system on BTS. This aims to provide a new innovation for a BTS, by calculating an accurate calculation to determine the ideal photovoltaic system, and calculating the performance ratio of the PLTS system.*

**Keywords:** *PLTS, BTS, Off Grid System, Kalimantan Region.*