

# **STUDI PERENCANAAN KAPASITAS GENSET SEBAGAI SISTEM BACK-UP ENERGI LISTRIK DI RUMAH TINGGAL**

**Turino**

*Program Studi Teknik Elektro, Fakultas Sains & Teknologi  
Universitas Teknologi Yogyakarta  
Jl. Ringroad Utara Jombor Sleman Yogyakarta  
E-mail: [turino697@gmail.com](mailto:turino697@gmail.com)*

## **ABSTRACT**

*To meet the needs of electrical energy, from housing, small industry to large industry, use electricity from PLN as the primary energy source. However, the electricity supply from PLN is not able to continuously provide electric energy without any interference. In anticipating such demand, it is necessary to have a backup system for electrical energy or a backup of electrical energy in the form of a generator set (genset) to maintain the need for electrical energy for the building or building. Therefore, this research was conducted to plan the capacity of a generator set as a backup system for electrical energy in a residential area, especially Mrs Parmi's boarding house in Nganti RT 01 RW 07, Mlati, Sleman, Yogyakarta Special Region. The planning is carried out corresponding to the needs of the electrical energy load installed at Mrs Parmi's boarding house. In determining the generator set's power capacity, data collection was carried out by calculating the electrical equipment in the house. From the electrical load calculation of the equipment in the house, the load data is obtained for 1542 Watt. In serving the electrical energy requirements in Mrs Parmi's boarding house, a generator set is needed as a backup system, if the primary source of electrical energy from PLN is disrupted. The power capacity equal to the requirements, which is 2 KVA or 2.5 KVA. The remaining electrical capacity from the generator can be used for new electronic devices to be used.*

**Keywords:** *Generator Set, Power Requirements, Electrical Energy, Genset Back-up System, PLN*