

## **ABSTRACT**

In the field of lighting, fluorescent light bulbs also known as TL has been used extensively both in industry and household use. Fluorescent lamp is a type of lighting is quite efficient at converting electrical energy into light energy, especially when compared to the type of filament lamp.

The presence of the fluorescent lamp ballast transformer is detrimental. Ballast transformer serves only at the start, after the fluorescent lamp light ballast transformer will result in a low power factor ballasts and transformers themselves absorb active power. Eliminate electromagnetic ballasts with electronic ballasts and replace the fluorescent lamp produces improved power factor fluorescent lamp can be lit at the same time on the power supply with voltage regulation is very poor. In this study the authors have compared the fluorescent lamp that uses a transformer with a fluorescent lamp ballast that uses electronic ballast. Input of tools that will be created is 220 volts of electricity.

System has been implemented and tested until the results are quite good. Of testing using a 35 watt fluorescent lamp with electronic ballast circuit rectifier, inverter, flyback converter and produced a stable flame at an arbitrary voltage. Both systems were tested from a voltage of 220 volts to low voltage until the lights went out, the lights went out ballast transformer system at a voltage of 170 volts while the systems that use electronic ballasts still burning bright.

**Keyword:** Fluorescent lamp, Frequency Switching, Electronic Ballast, AC Voltage Drop.