

**DESIGN AND BUILDING OF A EMERGENCY PORTABLE POWER  
STATION WITH OFF GRID SYSTEM PLTS TO SUPPORT  
ELECTRIC ENERGY DURING NATURAL DISASTER**

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**ABSTRACT**

*Renewable energy is something that will continue to innovate along with the increase in energy demand. One of the renewable energies is solar energy which is very easy to find in this country, because the location of the area passed by the equator which is illuminated by the sun every year makes it possible to use solar energy. Emergency portable solar station is one of the portable technologies that generates electricity by utilizing solar panels. Emergency portable solar stations are a solution during natural disasters as a source of supporting energy shown to the community during natural disasters. This emergency portable solar station uses solar power plants (PLTS) as the main energy. This solar power plant uses monocrystalline solar panels with a capacity of 300 Wp equipped with energy storage (battery) with a capacity of 12V 100Ah. In this study, PZEM 015-022 monitoring was used. The design carried out is expected to meet energy needs during natural disasters, from the results of the analysis that has been carried out, it is stated that the capacity of the solar power plant produced is 980 Wh in sunny and cloudy weather conditions and can meet the load power needs that will be used during natural disasters.*

**Keywords :** *Renewable Energy, Solar Panel, PZEM 015-022, Natural Disasters.*

