

***Combination of Eletrical Network From PLN with Solar Home System 100 Wp
Using Magnetic Contactor and Relay***

Hendra Agus Supriyadi
Renewable Energy Engineering
Engineering Department

ABSTRACT

Combination of Electrical Network From PLN with Solar Home System 100 Wp using Magnetic Contactor and Relay, which is supposed able to save electrical energy also to reach the continuity of electrical energy for household. The method in this research is by planning the device of On-Grid control system and tested, then measurement for all system, data analysis and technology analysis. The device of On-Grid control system use the comparator as the battery voltages reader, fuse (censor) for adjust On-Grid fuse system and also as the relay controller, and contactor as the controller that supplies the PLN electrical energy or the electrical energy of Solar Home System (SHS). The total value of electrical energy uses On-Grid control system during six days is got 0,54 kWh and 1,2 kWh when use PLN in general so the saving of electrical energy is 45% using saving energy lamp load (HE) 15 watt for 6 lamps. The influence of combining this electrical energy is that transferring the electrical energy from SHS to PLN or rather flicker of light occured on the lamp, also the comparator is not stable in the battery voltage so that noise from relay which influence the reading of level battery voltage, variable resistor in not stable comparator caused by quality from the component of variable resistor.

Keywords : Solar Home System, Magnetic Contactor, Relay, On-Grid System