

ABSTRAK

WAHYU, Prototype System Hybrid Based PLN And Wind Power Generator (PLTB). Instructors Irzan Zakir and Faried Wadjdi.

This research aims to create a prototype hybrid solar power system PLTB (Power Bayu) with PLN. Use of wind turbine modules into one solution that can be considered as a form of back-up power when PLN outage (blackout).

The method that used in this study is an R & D (research and development) method which is to create a hybrid system tool to combine electric energy that come from wind power and PLN with good control system. The type of control systems that being apply in this tool is ATS (Automatic Transfer Switch) for the supply of electric power that comes from wind turbine for alternately and PLN when PLN is in blackout situation for being main power to supply electric energy.

The results of this research by the utilization of wind energy that becoming into an alternative energy which is by converting AC voltage in electrical energy that can then be stored in the ACCU by converting AC into DC voltage of 12 V. In this study, duration of the usage for battery for to supply the load for prototype the house type 21 are about 97 minutes for the lights, 380 for the outlet, and 77 minutes for the whole load that start to on together.

The conclusion from this study is based Hybrid Prototype Electrical Installation PLN and a thermal power station with a control panel automatically switching on the power supply 1 Phase AC Power Installation with 15.3 watts of power can work according to plan, and automatically fired plant would be to back-up the load. Displacement fired plant to PLN virtually no delay because there is no flicker when the displacement fired plant to PLN.

Keywords : Sistem Hybrid PLN And PLTB (Wind).