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## **ABSTRACT**

Solar Power Plant (PLTS) is a system that can generate electricity by harnessing energy from the sun. PLTS consists of several subsystems: solar panels, charge controller and wet battery or accumulator.

Solar panel is a series of solar cells that is arranged in series. The function of solar panels is to convert solar energy into electricity. Charge controller is a regulator or process controller of a series storage, usage and the amount of electricity from solar panels to the battery and then to load. While wet battery / battery pack is an electric energy storage that has been generated by solar panels. Electricity that has been stored can be used for purposes of electrical energy at a later date.

In this final project to be emphasized is the realization of an analog circuits on the panel charge controller of 50 W solar panel, 12-17 V voltage, and 4,1-2.9 A current output. Charge controller circuit is made with an analog electronic circuit. This is because the cost is more economical and moreover analog equipment also has a better endurance component than the digital components. This hardware has main function as an electrical charge flow control between the wet battery, solar panel / battery pack and also a load. So that the operation and the use of 50 Watts solar power plants can operated and utilized properly.