ABSTRAK

Penulisan ini ditujukan untuk perancangan instalasi kelistrikan dari prototype BIPV berkapasitas 300WP (Watt Peak) yang digunakan untuk menghidupkan pompa dan penerangan. Analisa dari Rancangan ini diharapkan dapat digunakan sebagai model untuk mengembangkan jaringan Sistem Tenaga Listrik Tenaga Surya (PLTS) dalam skala bangunan/rumah sekaligus berfungsi sebagai pengganti atap rumah atau BIPV (Building Integrated Photovoltaic).

Hasil dari analisis ini berupa sistem rancangan, skema rancangan dan komponen yang digunakan. Dimana hasil dari analisis sistem yang digunakan adalah off grid, dan hasil dari uji coba rangkaian masih menyisakan energi yang bisa di manfaatkan lagi sebesar 300 Watt yang bisa digunakan untuk menyalakan tv atau kipas yang berdaya 50 watt selama 3 jam.

ABSTRACT

Most PVs are installed on roofs (tiles), so they cost too much. Because it has two costs, namely roofing of houses and installation of solar panels. Therefore, we created a group to design BIPV (Building Integrated Photovoltaic). BIPV is a solar-powered power plant that also functions as a roof. The BIPV can be designed with several systems, namely the system on the grid (with the help of energy supply from PLN) and the BIPV system off the grid (the energy comes only from solar panels) and hybrid (More than 2 energy sources, such as solar, magnetic and wind energy).

This writing is intended for the design of electrical installations from a prototype BIPV with a capacity of 300WP (Watt Peak) that is used to turn on the pump and lighting. The analysis of this design is expected to be used as a model to develop a network of solar power systems (PLTS) in a building / house scale while simultaneously functioning as a substitute for house roofs or BIPV (Building Integrated Photovoltaic).