

**DESIGN, DEVELOPMENT, AND CONSTRUCTION OF SOLAR
PHOTOVOLTAIC (PV) SYSTEM TRAINING MODULE (SPVSTM)**

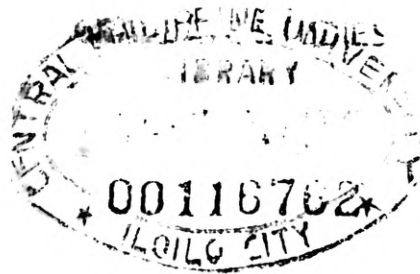
A Research Report

Submitted to

The University Research Center

Central Philippine University

Iloilo City



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June 2010

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ABSTRACT

This study aimed to design, develop, and construct a locally-made Solar PV System Training Module (SPVSTM) for educational use specifically on subjects related to alternative and renewable energy. This training module is an aid to enhance the skills of the students and practitioners regarding alternative and renewable energy. It also provides the basic component needed for the solar PV system assembled in a panel or module for easy installation and experimentations. The PV system comprised of four building blocks: the PV module; the current and the voltage regulated power supply; the charge controller, and the load. The load is composed of the DC system (DC lamp); AC system (Inverter and the AC lamp) and battery. The design, development, and construction of the SPVSTM were successfully made using a locally available component and the best circuit options for the functionality and reliability of the trainer. The SPVSTM was evaluated based on the features and specification required and successfully gave reasonable results. The system successfully indicated the desired output data needed based on its nameplate rating using the simulated input voltage from the regulated power supply and the battery.