## Stand-Alone PV System Design Between Planning And Applying<sup>\*</sup>

Eng .Youssef ALjallab\*\*

Phd Eng .Abas Sondouk<sup>\*\*\*</sup>

## Abstract

This research aims at studying types of PV Systems and their applications in many practical fields. It also aims at looking into all the components and technical specifications of the equipment. That's what serves these systems' design and implementation ways through designing and performing a 12 [KW] Stand- alone PV System. This system is usually used to supply one of the Green Buildings lighting at night with a back- up grid to achieve a high reliability in supplying the load. This project also aims at strengthening national qualifications in the fields of research, development and operation.

Keywords: Stand-Alone PV System Design.

<sup>\*</sup> For The paper in Arabic see pages(515-529)

<sup>\*\*</sup> This research is prepared for the Master, by: Engineer Youssef Ghassan Al-jallab, Department of Electrical Power- Renewable Energy Section- Faculty of Mechanical and Electrical Engineering - Damascus University. \*\*\* Under the supervision of Dr. Eng. Abbas Sondouk, Assistant Professor at Department of Electrical Energy-Faculty of Mechanical and Electrical Engineering - Damascus University

## **References:**

- [1]- Mohammad Sabone "Stand Alone PV
- System Industry (PV Laboratory-NSC 2005).
- [2]- Ali Hamzah "PV System Engineering Design and Analysis", (Damascus University 2008).
- [3]-Avon Project Engineering (Damascus University 2008).
- [4]- Planning And Installing PVS A Guide for Installers Architects and Engineers (German Solar Energy Society –DGS LV Berlin BRB 2005).
- [5]-Wind and Solar Design, Analysis, and Operation, Second Edition 2006 U.S. Merchant Marine Academy, New York.
- [6]- BAE SECURA PVV CELL solar "Technical Specification for Valve Regulated Lead-Acid Batteries (VRLA)/2008".
- [7]-Steca Elektronik GmbH Germany "Steca Power Tarom 2140".
- [8]-Steca Elektronik GmbH | 87700 Memmingen "Steca Compact 2600-24.