

## Performance Evaluation of Different Technologies of PV Modules in Algeria

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**Abstract :** This paper is dealing with the evaluation of photovoltaic modules as part of the Sahara Solar Breeder project (SSB), five different photovoltaic module technologies which are: m-si, CIS, HIT, Back Contact, a-si<sub>μc</sub>-si and a weather station recently installed at the University of Saida (Tahar Moulay) in Saida city located at the gate of the great southern Algeria's Sahara. The objective of the present work is the study of solar photovoltaic capacity and performance parameters of each PV module technology. The goal of the study is to compare the five different PV technologies in order to find which technologies are suitable for the climate conditions of Algeria's desert. Measurements of various parameters as irradiance, temperature, humidity and so on by the weather station and I-V curves were performed outdoors at the location without shadow. Finally performance parameters as performance ratio, energy yield and temperature losses are given and analyzed.

**Keywords :** photovoltaic modules, performance ratio, energy yield, sahara solar breeder, outdoor conditions

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