

Technical and Practical Aspects of Sizing a Autonomous PV System

Authors : Abdelhak Bouchakour, Mustafa Brahami, Layachi Zaghba

Abstract : The use of photovoltaic energy offers an inexhaustible supply of energy but also a clean and non-polluting energy, which is a definite advantage. The geographical location of Algeria promotes the development of the use of this energy. Indeed, given the importance of the intensity of the radiation received and the duration of sunshine. For this reason, the objective of our work is to develop a data-processing tool (software) of calculation and optimization of dimensioning of the photovoltaic installations. Our approach of optimization is basing on mathematical models, which amongst other things describe the operation of each part of the installation, the energy production, the storage and the consumption of energy.

Keywords : solar panel, solar radiation, inverter, optimization

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