Abstract

This paper proposes the modeling and simulation of the incident solar radiation on a horizontal and inclined plane in the city of Agadir. To do, we adopt the Kasten model which takes the atmospheric turbidity into consideration in order to estimate the incidental solar radiation on a horizontal plane. In addition we determine the incident solar radiation on an inclined plane from the global horizontal radiation. To validate the chosen models, we compare the simulated values of the solar radiation with the experimental measurements given by the installed CRX10 Campbell meteorological station in our laboratory.

References

2. Arnau Gonzalez, Jordi-Roger Riba, Antoni Rius, Rita Puig, Optimal sizing of a hybrid
grid-connected photovoltaic and wind power system, Applied Energy 154, 2015, pp. 752-762.

Index Terms

Computer Science
Power Systems
Keywords

Prediction; Solar radiation; Kasten model; Klucher model.