Abstract

A sizing algorithm for a photovoltaic water pumping installation composed of photovoltaic panels, battery; bank, DC/AC converters and a water pump is presented. Considering criteria related to the battery; bank safe operation, fulfilling the water volume needed by the crops and ensuring a continuous operation of the pump, the algorithm decides the size of the installation; components. The installation; cost using the presented and the basic algorithms are compared. Obtained results confirm that the water demand is covered during the crops; vegetative cycle with a minimum use of the battery; bank and minimum cost.

References

hybrid renewable energy systems. Renewable and Sustainable Energy Reviews. (2009), 2111-2118.


Index Terms

Computer Science Algorithms

Keywords

Photovoltaic energy sizing algorithm water pumping.