

Abstract

While Algeria has an important potential of wind and solar energies, their share in the primary energy supply is relatively low compared to the fossil energy. In this paper, we propose to carry out a techno-economical study of a hybrid stand alone system in order to draw the attention to the feasibility of such systems. For this purpose, sites of Hassi-R'mel and Adrar have been considered due to their important renewable potential. The chosen sites are located in the Algeria deserts and have an important solar potential. Concerning the wind potential, those two regions constitute the windiest regions in Algeria with an annual average wind speed of more than 6 m/s. The optimisation task is handled by the dedicated software HOMER which is a well known, robust and efficient tool to carry out such an activity. The two sites show promising potential with some characteristics distinguishing each region.