The Egyptian International Journal of Engineering Sciences & Technology, Vol 17, No 3 (2014)

# SIZING AND COST ANALYSIS OF A STAND-ALONE SOLAR PUM SYSTEM FOR IRRIGATION PURPOSES

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## Abstract

There is an increasing trend towards the use of alternative or renewable energy as a clean energy source f production of electricity for various purposes, such as water pumping for irrigation. The potential for non-t site power generation also remains enormous in Egypt with increasing investments in small-scale solar-po Promotion of energy production from combination of sources of energy, known as hybrid scheme, is repres important objective of meeting the energy demand. In the present study, a solar system is optimally desig stand-alone PV-powered irrigation system that uses a submersible pump consuming an average of 50 kWh energy per day to irrigate 10 acres of land. Also, cost optimization of the solar/pump system is carried out useful guidelines for small-scale stand-alone solar system designers and manufacturers