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ABSTRACT

Smart Irrigation System Based on Solar Cells

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An effective irrigation system will be designed to contribute to the low cost of energy using solar energy from irrigation systems in arable and desert lands in an eco-friendly manner. The project involves the construction of an independent network system that is fully solar-powered. The DC pump is operated through the energy produced by the solar cells to pump water from the water source (Well or groundwater) to a high reservoir, for use in the process of irrigating the plants by the valve on the outlet of the tank, Where the valve is connected using Arduino and humidity and heat sensors to control the flow of water from the reservoir to the field. Batteries are used to store day-to-day energy for use in controller and sensor feeds or in small DC loads.

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