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Water Irrigation in the Chlef Region Using Photovoltaic Solar Energy

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Abstract : This paper presents a theoretical study that leads to the design of a photovoltaic pumping system to irrigate six hectares of oranges in the valley of Chlef using the software "PVSYST". It was shown that the site of Chlef presents a favorable climate to this type of energy with an irradiation of over 5 kWh/m2/day, and significant resources underground water. Another very important coincidence still promotes the use of this type of energy for pumping water in Chlef is that the demand for water, especially in agriculture, peaked in hot and dry where it is precisely when one has access to the maximum of solar energy.

Keywords : solar energy, irradiation, water pumping, design, Valley of Chlef
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