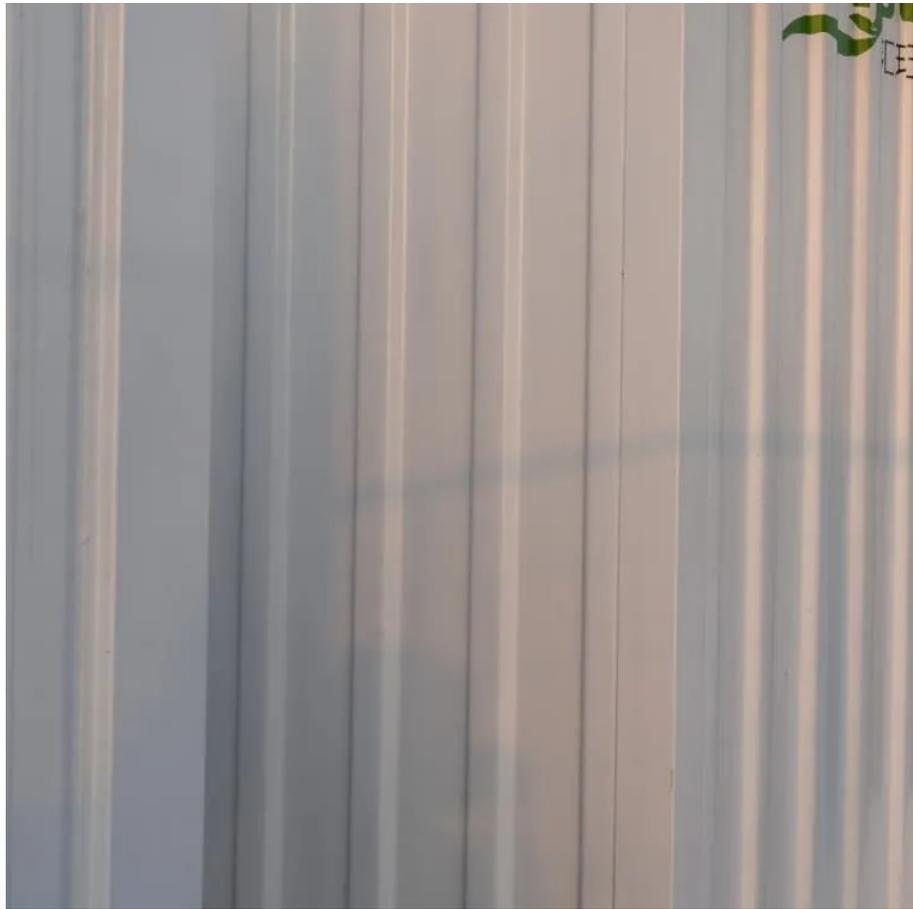


Pumping distance of solar powered small water pump





Overview

How do you design a solar water pumping system?

When designing a solar pumping system, the designer must match the individual components together. A solar water pumping system consists of three major components: the solar array, pump controller and electric water pump (motor and pump) as shown in Figure 1.

How to choose a solar water pumping system?

The type of solar water pumping system: borehole/well (submerged), floating or surface will depend on the water source. If the source is a borehole (proposed or existing) or deep well, then a submersible pump that fits the borehole or well should be selected. If the water source is a river, then a surface pump should usually be selected.

How does a solar pumping system work?

Solar pumping system requires the use of a solar photovoltaic panel to generate electricity from the sun to drive a pump which sucks up water from a particular source and discharges the water either to an over-head tank or piping within a long distance where water is needed. This is carried out in locations where electricity is unavailable.

How to design a small-scale solar pump?

METHODOLOGY The design of a small-scale solar pump begins with the knowledge of daily water required, the solar irradiation of the location, the pumping time, the total head and power required to drive the water by the pump from the source to its destination . Calculating the water requirement. Determining the solar irradiance.



Pumping distance of solar powered small water pump



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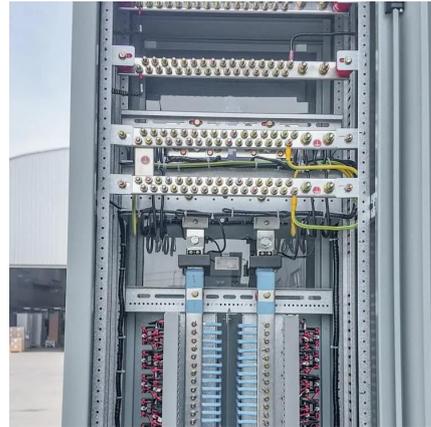
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