

SOLAR WATER PUMP

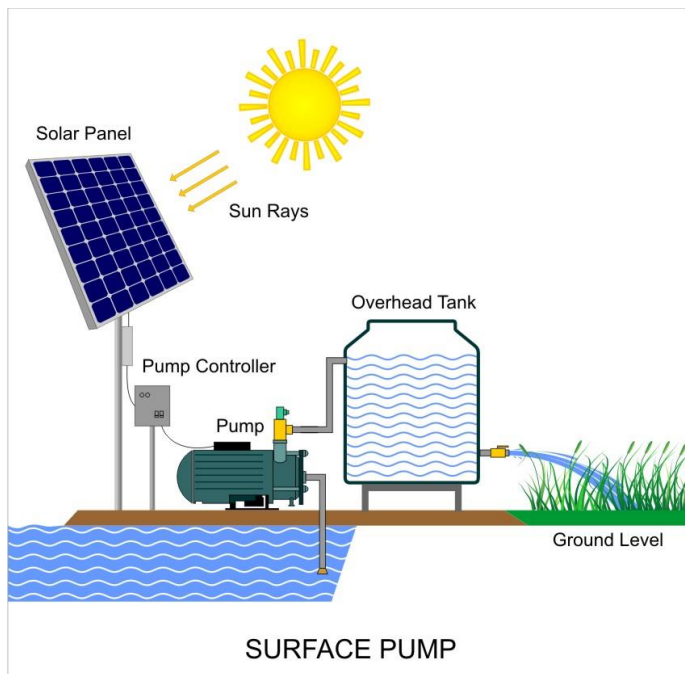
-TEAM SHADOW

Motivation :

One of the basic necessities for survival of life is water. Transport of water has become an essential part of life. Energy is also a main constraint in the modern society because of rapidly depleting fossil fuels. In this case, non-renewable sources of energy, solar energy in particular, is to be highly explored. So it is a great idea to use solar energy to transport water. The existing solar water pumps are expensive and are mostly used for large scale operations. So we aim at building a cost-effective small scale solar water pump.

Broad-Vision :

The proposed project will have it's application in many house-hold and small scale measures of transport of water. Its principal application will be in villages where there is no sufficient power supply. The project will be highly useful for farmers.



Demonstration :

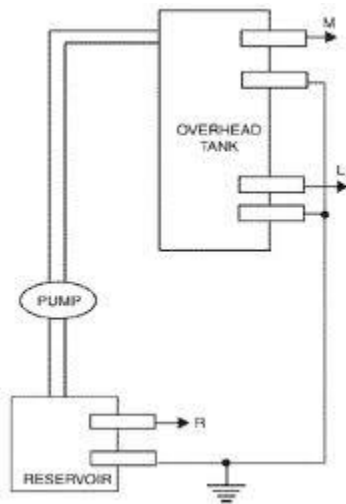
The final object of the project will be a working model of a small-scale water pumping system which runs on solar power. It will be capable of transporting water through small distances/heights using eco-friendly solar energy.

Timeline :

Week 1 : Complete research and understanding of working of solar panel and deciding the most optimal specifications of solar panel.

Week 2 & 3 : Prepare a draft working model of the proposed project and embed it with the real life situation.

Week 4 : Conducting test cases and optimization of pumping distance/height by making necessary changes using practically observed values.



Components :

24V Brushless DC Motors	–	Rs 2100
12V-10W Solar panel	–	Rs 3000
Connecting Wires and otherelectrical equipment	–	Rs 600
Pipes(To transport water)	-	Rs 150
Turbine(3d printing) or (from available materials)	-	Rs 500

What we expect to learn from this project :

- To work in a group and associate different tasks to different people and conclusively reach to the final aim.
- Presentation skills to exhibit our project to society.
- To get the basic idea of working on a long tenure project with a group of people.

Team Members :

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