



RESEARCH PAPER

An economic analysis of 3 HP solar water pump in tribal area of Udaipur district, Rajasthan

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Abstract : Solar energy is the most appropriate energy form in the Indian context among all renewable energy sources. India has taken the lead in promoting the development of a solar-based economy worldwide. Solar water pumps have emerged out as a feasible and budget-friendly technology to increase energy access for sustainable agriculture. They have proved to be a better substitute to electric and diesel pumps owing to increasing diesel prices and vulnerable state of electricity in India. Because of the increased affordability of solar pumps after subsidies, the popularity of solar pumps has increased in Rajasthan, which has resulted in an increased rate of adoption. Considering the role of solar pumps in current scenario and that of future, this study was conducted to analyse the economic viability of a 3 HP solar water pumps. The findings of the study revealed that the 3 HP solar water pump was economically feasible based on NPV, PBP and B:C ratio.

Key Words : Solar water pump, Payback period, Net present worth, Benefit-cost ratio

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