

Solar-Powered Pumps Market anticipated to surpass US\$6,560.99 million by 2030 at a CAGR of 10.18%

The solar-powered pumps market is expected to grow at a CAGR of 10.18%, reaching a market size of US\$6,560.99 million in 2030 from US\$4,040.25 million in 2025.



NOIDA, UTTAR PRADESH, INDIA, December 18, 2024 /EINPresswire.com/ -- According to a new study published by Knowledge Sourcing Intelligence, the [solar-powered pumps market](#) is projected to grow at a CAGR of 10.18% between 2025 and 2030 to reach US\$6,560.99 million in 2030.

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Solar-powered pumps outperform standard electric and fuel-powered pump sets because they are less expensive, easier to use, and more energy efficient. These pumps are widely utilized in home and commercial applications, as well as agriculture. They use [solar energy](#) instead of petroleum, making them a more cost-effective and environmentally responsible solution for pumping water. Simultaneously, it benefits countries where farmers have poor wages and limited access to traditional fuels for pumping. The market is also being propelled by increased government investment in inexpensive, dependable, and environmentally friendly energy infrastructure, notably in

the agricultural sector. Furthermore, significant technological advancements in solar technology are driving market expansion for solar-powered pumps.

Further, solar-powered water pumps, which employ photovoltaic technology to convert solar energy into electricity, are becoming increasingly popular in the agricultural sector as an alternative to polluting diesel-powered pumps. Solar-powered pumps are also in high demand in this area because of their low cost. It is especially advantageous in areas where farmers have poor incomes and limited access to conventional fuels.

Moreover, a solar pumping system consists of three basic components: an [electric motor](#), a

photovoltaic (PV) array, and a pump. These pumps are classified as direct current (DC) or alternating current (AC) depending on their motor type. They are widely employed in a variety of sectors, including agriculture, waste management, and industry.

Additionally, solar-powered pumps are more affordable than typical fuel-powered pumps. At the same time, these pumps are environmentally friendly because they eliminate the need for carbon-emitting fuels. As a result, several countries around the world have begun to use a clean, accessible, and sustainable source of electricity for irrigation. Egypt, with high solar radiation of 2000-3200 kWh/m² and 9-11 hours of sunshine daily, uses it for home usage, irrigation, cattle watering, and village water supply. As a result, the growing demand for solar-powered pumps is motivated by their cost-effectiveness, dependability, and sustainability, making them an appealing choice for a variety of industries.

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The Solar-powered pumps market is segmented by motor type into two major categories: AC pump and DC pump. A DC controller directly connects a photovoltaic array to a pump assembly powered by a DC motor is termed as a DC pump controller. Compared to AC pumps, which have the same sizes and capacity, a DC pump is generally more efficient and has a longer life because no power conversion is involved. These pumps are normally effective for head and flow limitations, and for most applications, they are commonly employed for lower head, lower capacity applications, generally up to 4 kW. Some of the hurdles to adopting DC pumps compared to AC pumps are the kinds of wrong wiring cases, breakdowns in electronic circuitry, unsafe DC voltages, and ends that do not give a proper electrical connection.

The Solar-powered pumps market by application category is segmented into agriculture, water management, and industrial. During the forecast period, the agriculture sector is expected to have the greatest share of the solar-powered pump market. In some nations, many farmers do not have access to electricity, therefore they rely heavily on rain for irrigation. Solar-powered pumps provide a more reliable and sustainable energy source that is less expensive than regular pumps and better for the environment. Therefore, the agriculture sector is driving the solar-powered market by providing solar-powered pumps that give benefits like non-reliance on fuel and power grid systems by producing electricity from readily available sunlight.

Based on geography, the Asia Pacific region of the solar-powered pumps market is growing significantly. The market is expected to increase significantly throughout the forecast period. Countries such as China and India are increasingly using solar-powered pumps for both irrigation and wastewater management. Government programs such as PM-KUSUSM in India are driving the market growth for solar-powered pumps.

As a part of the report, the major players operating in the Solar-powered pumps market that have been covered are Vincent Solar Energy, Tata Power Solar Systems, LORENTZ, SunEdison

Infrastructure, Lubi Industries LLP, Oswal Pumps, Greenmax Technology, Shakti Pumps India Ltd, Aquatec International, Well Pump Group, Franklin Electric Inc., SOLAR PUMPTEC, Aquasub Engineering, Bright Solar Limited, GRUNDFOS.

The market analytics report segments the Solar-powered pumps market as follows:

- By Motor Type
 - o AC Pump
 - o DC Pump
- By Application
 - o Agriculture
 - o Water Management
 - o Industrial
- By Geography
 - North America
 - o USA
 - o Canada
 - o Mexico
 - South America
 - o Brazil
 - o Argentina
 - o Others
 - Europe
 - o Germany
 - o France
 - o UK
 - o Others
 - Middle East and Africa
 - o Saudi Arabia
 - o UAE
 - o Others

- Asia Pacific
 - o China
 - o India
 - o Japan
 - o South Korea
 - o Taiwan
 - o Thailand
 - o Indonesia
 - o Others

Companies Profiled:

- Vincent Solar Energy
- Tata Power Solar Systems
- LORENTZ
- SunEdison Infrastructure
- Lubi Industries LLP
- Oswal Pumps
- Greenmax Technology
- Shakti Pumps India Ltd
- Aquatec International
- Well Pump Group
- Franklin Electric Inc.
- SOLAR PUMPTEC
- Aquasub Engineering
- Bright Solar Limited
- GRUNDFOS

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