

Global Solar E-Bike Market Surges from USD 1.66 Billion in 2030 to USD 6.01 Billion by 2040

WILMINGTON, NEW CASTLE, DE, UNITED STATES, November 17, 2025 /EINPresswire.com/ -- According to a new report published by Allied Market Research, titled, "[Solar E-Bike Market](#) Size, Share, Competitive Landscape and Trend Analysis Report, by Motor Type, by Battery Type, by Application, by Consumer Segment, by Power Output : Global Opportunity Analysis and Industry Forecast, 2030-2040." The report provides an in-depth analysis of top segments, changing market trends, value chain, key investment pockets,

competitive scenario, and regional landscape. The report is an essential and helpful source of information for leading market players, investors, new entrants, and stakeholders in formulating new strategies for the future and taking steps to strengthen their position in the market.



The global solar e-bike market set to reach at \$1.66 billion in 2030, and is projected to reach \$6.01 billion by 2040, registering a CAGR of 13.7% from 2030 to 2040.

Solar e-bike is a type of bike that combines electric and solar energy to supply power to the vehicle for propulsion. It is one of the most eco-friendly innovations in the world along with convenient solar charging option, which offer a better option for charging solar electric bike batteries. At present, improvements in solar cell technology (nanocrystal solar cells), combined with ingenious placement of solar cells, offers convenient solar charging option by delivering opportunity for placing solar cells or solar panels on electric bikes to help charge batteries. For instance, Ele launched a solar e-bike with solar panels on its wheels that rotate 30 degrees on both sides, to face toward sun. This is to absorb as much sun-power that it can. This hybrid bike can be charged via electricity and the sun. Moreover, over time, various connectivity solutions have been developed by manufacturers and service providers to improve security, safety and serviceability of these bikes. For instance, in 2019, engineering and technology company Bosch, unveiled new Smartphone Hub for solar e-bikes which offers wide range of functions including everything from navigation, music control, fitness tracking, making calls, performing diagnostics

on the solar e-bike and using smartphone services and apps such as Strava or komoot.

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In addition, the solar e-bike market size has witnessed significant growth in recent years, owing to the various initiatives by governments for adoption of small electric mobility is expected to create numerous opportunities for key players operating worldwide. Furthermore, the companies operating in the market have adopted several contracts, investments, and product launches to increase their market share and expand their geographical presence. For instance, in March 2022, the Indian Government has announced the setting up of solar thermal plants at major government hospitals & financial assistance for purchase of electric vehicles. The government proposes to set up concentric solar thermal plants at the GMC, Asilo and Hospicio (hospitals) to substitute the use of fossil fuels. Similarly, Sanyo (Japan) opened two solar parking lots in Tokyo where around 100 electric bicycles can be recharged from solar panels.

Factors such as positive government regulations and policies to encourage the use of solar e-bikes, increase in fuel costs, and rise in interest in cycling as a fitness & recreational activity is expected to drive the solar e-bike market growth. However, high purchase & and maintenance cost of solar e-bikes and low operating efficiency of solar e-bikes as compared to traditional bikes are some of the factors that hinders the market growth. Furthermore, technology advancement in solar e-bikes and improvement in the bicycle infrastructure are expected to offer lucrative opportunities for market growth.

COVID-19 Impact Analysis :

The COVID-19 crisis is creating uncertainty in the market. Governments of different regions have announced total lockdown and temporary shutdown of industries, thereby adversely affecting the overall production and sales. It also resulted in flight cancellations, travel bans, and quarantines, which led to massive slowing of the supply chain and logistics activities across the world. However, there are several sectors of the industry that are using this period as an opportunity for the development of their business. The solar e-bike industry is one of those industries that is projected for better growth post COVID-19. However, the sale of solar e-bikes was dampened in the first quarter of 2020, as bikes stores were closed due to lockdown. Owing to the COVID-19 pandemic, commuters are mostly avoiding the use of public transportation and solar e-bikes are considered a safe, convenient, and affordable alternative to public transportation. In addition, the pandemic has changed the way people commute, and bicycling has become even more popular around the world.

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China has witnessed a growing demand in this field. For instance, according to the Ministry of

Industry and Information Technology, China registered a surge in demand for solar e-bikes and reached the production at 25.48 million during the first 10 months of the 2020, a year-on-year increase of 33.4%. In addition, according to Taiwan External Trade Development Council (TAITRA), Taiwan records 21% increase in e-bike exports. Thus, according to International Nederlanden group (ING) report, there has been an increase in the number of people opting for e-bikes during the global health crisis and people are depending on electric mobility for emergencies such as food supplies or medicines.

Therefore, the solar e-bikes market is estimated to observe a huge boost in sales in post COVID-19 situation. However, post 2021, the market is expected to return to normalcy. The demand for solar e-bikes would grow at a moderate rate, considering the continuation of safer public and private transportation systems, such as metros, buses, and cab/ride-sharing platforms.

Key Findings Of The Study :

By motor type, hub segment dominated the global solar e-bike market, in terms of growth rate.

On the basis of battery type, the Lithium-ion segment is anticipated to exhibit a remarkable growth during the forecast period.

On the application, the fitness segment is anticipated to exhibit a remarkable growth during the forecast period.

By consumer segment, the rural segment is anticipated to exhibit a remarkable growth during the forecast period.

On the basis of power output, the above 250W segment is anticipated to exhibit a remarkable growth during the forecast period.

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Accell Group, CSE EV Group Co., Ltd., Derby Cycle, Fuji-Ta Bicycle Co., Lt., Giant Group, Merida Bikes, Royal Gazelle, Trek Bicycle Corporation, Yadea Technology Group Co, Ltd., Yamaha Motor Corporation, Kona Bikes, The Sun Trip, Vintage Electric Bikes, Charge And Bottecchia Cicli S.r.l are some of the leading key players operating in the solar e-bikes market.

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David Correa

Allied Market Research

+ + + + +1 800-792-5285

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