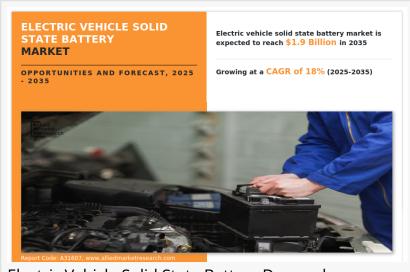


Market Size of Electric Vehicle Solid State Battery Industry Expected to Reach \$1.9B by 2035, CAGR of 18% (2025-2035)

PORTLAND, OREGAON, UNITED STATES, April 10, 2024 /EINPresswire.com/ --According to a new report published by Allied Market Research, titled, "<u>Electric</u> <u>Vehicle Solid State Battery Market</u>," The electric vehicle solid state battery market is expected to be valued at \$0.37 billion in 2025, and is estimated to reach \$1.9 billion by 2035, growing at a CAGR of 18% from 2025 to 2035.

The Asia-Pacific electric vehicle solid state battery market includes China, India, Japan, South Korea, Rest of Asia-Pacific. The growth of the market in



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Electric Vehicle Solid State Battery Demand
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Asia-Pacific is driven by upsurge in adoption & utility of electric vehicles, increase in investments & research for improvement in research from private organizations, and initiatives taken by the multinational organizations to develop solid state battery technology. Japan is significantly contributing toward the growth of the market, as several multinational organizations such as Toyota Motor Corp, Nissan Motor Co., and Honda Motor Co. are operating in the EV solid state battery market. China and South Korea are evolving as a major manufacturing hub for solid state battery. Toyota Motor Corporation has formed a team of around 200 individuals that are working on developing advanced solid-state battery, aiming to install it in cars by the end of 2020. Other established companies operating in the Asia-Pacific region include Planar Energy Devices Inc., Robert Bosch, Front Edge Technology Inc., Hitachi Zosen Corporation, Cymbet Corporation, and other.

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On the basis of battery energy density, the global electric vehicle solid state battery market has been segmented into Less than 450 Wh/kg, and More than 450 Wh/kg. Solid state battery with energy density less than 450 Wh/kg are considered in this segment. Battery with less than 450 Wh/kg density can be used in light duty vehicles, passenger vehicles and others. Solid-state batteries offer significant advantages over traditional lithium-ion and semi-solid-state batteries in terms of individual cell energy density, charge rate, safety, durability, and thermal management. Battery manufacturers prototype solid-state batteries so automakers can evaluate them for future electric vehicles. For instance, in July 2022, Svolt Energy launched a prototype, 20 Ah sulfide solid state battery cell with an energy density of 350-400 Wh/kg. These prototype cells have passed nail puncture and thermal runaway tests at temperatures up to 200°C. Batteries are expected to be used in electric vehicles to travel more than 1,000 kilometers on a single charge.

Significant factors that impact growth of the electric vehicle solid state battery market comprise increase in demand for <u>fast charging technology in electric vehicles</u>, increase in need for long range electric vehicle, increased safety as solid state batteries have less chance of overheating as compared to lithium-ion batteries. However, higher cost compared to conventional EV batteries, and technological challenges for development of solid state batteries are expected to hamper the market growth. Furthermore, rise in adoption of zero-emission electric vehicles, favorable government regulations, and development of battery-as-a-service model are expected to create new growth opportunities for the market during the forecast period.

To fulfil the changing demand scenarios, market participants are concentrating on business expansion and investments to meet new business opportunities. For instance, in September 2021, Toyota Motor Corporation announce to invest \$13.6 billion in solid-state battery development and supply over the next decade as the world's largest carmaker. Moreover, in June 2022, Solid Power, a developer of all-solid-state battery cells for electric vehicles, announced that it has completed installation of its pilot production line named as "EV cell pilot line" which is designed to produce EV-scale solid-state cells. In addition, market participants are continuously focusing on product launch and product development efforts to match changing end-user requirements. For instance, in December 2021, Toyota Motor Corporation announce to deploy solid-state batteries in its hybrid vehicles by 2025 before introducing the technology to BEVs.

The COVID-19 pandemic disrupted the entire global automotive supply chain, impacting new car sales in 2020. Restricted supply of auto parts, declining new car sales, manufacturing plant closures and loss of working capital were among the biggest problems facing the automotive industry as a result of COVID-19.

The outbreak of COVID-19 led to reduced demand for electric vehicles. However, post pandemic, key market players subsidized the development of solid state batteries to deal with battery related issues such as thermal performance, discharge rate, among others. For instance, QuantumScape, an American company develops solid-state, lithium-metal battery for electric vehicle. Such developments and increase in R&D activities in solid state batteries are expected to create an opportunity for electric vehicle solid state battery market during the forecast period.

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By vehicle type, the commercial vehicle segment is anticipated to exhibit significant growth in the near future.

By propulsion type, the <u>battery electric vehicle</u> segment is anticipated to exhibit significant growth in the near future.

By battery energy density, the more than 450W segment is anticipated to exhibit significant growth in the near future.

By region, Asia-Pacific is anticipated to register the highest CAGR during the forecast period.

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Cymbet, Limited (CATL), Ilika, LG Chem, Northvolt AB, Panasonic Corporation, QuantumScape Corporation, Samsung SDI Co., Ltd., Solid Power, STMicroelectronics, Toyota Motor Corporation, TDK Corporation.

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