EV Battery Market by Battery Type (Li-ion, NiMH, SSB), Vehicle Type (PC, Vans/Light Truck, MHCV, Bus & OHV), Propulsion, Battery Form, Material Type, Battery Capacity, Method, Li-ion Battery Component, and Region - Global Forecast to 2035

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Report description:

The global EV Battery market is projected to reach USD 91.93 billion in 2024 to USD 251.33 billion in 2035, at a CAGR of 9.6% from 2024-2035.
The EV battery market is experiencing rapid growth driven by increasing electric vehicle adoption, advancements in battery technology, and supportive government policies. Growing demand for longer-range, faster-charging batteries has spurred innovations such as Honda's plan to produce solid-state batteries offering up to 620 miles on a single charge by 2024. Additionally, partnerships and investments are fueling expansion, such as Stellantis and CATL's USD 4.2 billion venture for a lithium iron phosphate battery plant in Spain, announced in December 2024. With OEMs launching new EV models and battery manufacturers scaling production, the EV battery market is poised for significant expansion.
"Solid-state battery is expected to show a significant growth rate in the EV battery market during the forecast period."
Solid-state batteries are anticipated to witness significant growth in the EV battery market due to their potential to revolutionize energy density, safety, and charging efficiency. These batteries replace the liquid electrolyte found in conventional lithium-ion batteries with a solid electrolyte, offering enhanced thermal stability, reduced risk of fires, and longer lifespans. Their higher energy density can substantially increase EV range while enabling faster charging times, making them a game-changer for EV adoption. Recent developments underscore their growing momentum. In December 2024, Honda announced plans to produce solid-state batteries for EVs capable of delivering up to 620 miles (1,000 kilometers) on a single charge-more than double the range of many existing electric vehicles. Similarly, in September 2024, Factorial collaborated with Mercedes-Benz to develop the Solstice battery, an all-solid-state battery featuring a novel dry cathode design. This innovation promises an energy density of up to 450Wh/kg and more efficient, sustainable production processes, marking a significant leap in solid-state battery technology. With leading automotive and battery companies intensifying their R&D efforts and governments incentivizing advancements in

battery technology, solid-state batteries are poised to play a pivotal role in shaping the future of the EV market, addressing key challenges like range anxiety, safety concerns, and charging infrastructure limitations.

"Passenger Car is expected to hold the largest share in the EV Battery market during the forecast period."

Passenger cars are expected to dominate the EV battery market over the study period, capturing the largest market share due to surge in consumer demand, supportive government policies, and the increasing availability of diverse EV models. Governments worldwide are implementing stringent regulations on vehicle emissions and offering subsidies to promote EV adoption, driving passenger car sales. Additionally, advancements in EV battery technology, such as enhanced energy density, faster charging, and lower costs, have made electric passenger cars more accessible to the mass market. Major automotive OEMs are gearing up for this transition, with several passenger car EV models slated for release in the coming years. For instance, Renault's highly anticipated Renault 5 E-Tech, set for a 2026 launch, will feature advanced lithium-ion batteries sourced from AESC. Similarly, Mercedes-Benz plans to introduce the EQA 300 4MATIC in 2025, equipped with a high-performance NMC battery provided by SK ON, a subsidiary of SK Innovation. These vehicles highlight the rising demand for advanced EV batteries, driving innovation and production growth in the battery industry. Advances in battery chemistry, such as the shift from LFP to NMC and NCA, are boosting energy density and driving ranges, fueling market expansion. Collaborations between OEMs and battery manufacturers are accelerating high-performance battery development. For instance, in November 2024, LG Energy Solution announced a five-year agreement to supply 4695 cylindrical lithium-ion batteries for Rivian's R2.

Investments in new technologies like solid-state batteries and silicon anode chemistries, along with scaling production through gigafactories, are further enhancing market growth. These trends underscore the synergy between OEMs and battery makers, positioning the passenger car segment as the largest driver of the EV battery market and advancing the global shift to sustainable transportation.

"Europe set to witness a notable growth in EV battery market during the forecast period."

Europe is poised to experience remarkable growth in the EV battery market over the forecast period, fueled by stringent emission reduction targets, rising EV demand, and increasing investments in battery infrastructure. The EU's March 2023 law mandates zero CO? emissions for all new cars sold by 2035, alongside a 55% reduction in CO? emissions by 2030 compared to 2021 levels. These ambitious targets are driving the rapid decarbonization of new car fleets, significantly boosting EV adoption and, consequently, the EV battery market. While the EU has pledged a legal pathway for e-fuels vehicles beyond 2035, the focus remains on zero-emission solutions for cars and vans. European OEMs are heavily investing in EV and battery developments. For instance, in December 2024, Stellantis NV and CATL announced an estimated USD 4.3 billion joint venture to build a large-scale lithium iron phosphate (LFP) battery plant in Zaragoza, Spain. Similarly, BMW Group plans to open five battery factories near auto manufacturing hubs, including facilities in Lower Bavaria and Debrecen, Hungary, to support its Neue Klasse electric vehicles. Key battery manufacturers are also expanding their presence in Europe. Major players like Northvolt, LG Energy Solution, and CATL are establishing battery gigafactories to meet the growing demand. These developments underscore Europe's commitment to becoming a global leader in EV batteries, supported by progressive policies, a robust automotive ecosystem, and increasing investments from OEMs and suppliers.

In-depth interviews were conducted with CEOs, marketing directors, other innovation and technology directors, and executives from various key organizations operating in this market.

- By Company Type: Tier I - 37%, Tier II - 41%, and Tier III - 22%
- By Designation: Directors - 31%, Managers - 45%, and Others - 24%
- By Region: Asia Pacific - 33%, North America - 39%, and Europe - 28%

The EV Battery market is dominated by major players, including Contemporary Amperex Technology Co., Limited (China), BYD Company Ltd. (China), LG Energy Solution Ltd. (South Korea), CALB (China), SK Innovation Co., Ltd. (South Korea) and more. These companies are expanding their portfolios to strengthen their EV battery market position.

Research Coverage:

The report covers the EV Battery market in terms of Battery Capacity (<50 kWh, 51-110 kWh, 111-201 kWh, 201-300 kWh, > 301 kWh), Battery Form (Prismatic, Pouch, Cylindrical), Battery Type (Lithium-ion, Nickel-metal Hydride, Solid-state, Sodium-ion), Lithium-ion Battery Component (Negative Electrode, Positive Electrode, Electrolyte, Separator), Material Type (Cobalt, Lithium,

Natural Graphite, Manganese, Iron, Phosphate, Nickel), Method (Wire Bonding, Laser Bonding, Ultrasonic Metal Welding), Propulsion (Battery Electric Vehicle, Plug-in Hybrid Electric Vehicle, Fuel Cell Electric Vehicle, Hybrid Electric Vehicle), Vehicle Type (Passenger Cars, Vans/Light Trucks, Medium & Heavy Trucks, Buses, Off-highway Vehicles), and Region. It covers the competitive landscape and company profiles of the significant EV Battery market players.
The study also includes an in-depth competitive analysis of the key market players, their company profiles, key observations related to product and business offerings, recent developments, and key market strategies.
Key Benefits of Buying the Report:
-The report will help market leaders/new entrants with information on the closest approximations of revenue numbers for the EV Battery market and its subsegments.
-This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies.
-The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.
-The report also helps stakeholders understand the current and future pricing trends of the EV Battery market.
-The report will help market leaders/new entrants with information on various trends in EV Battery market based on component, battery form, region, and other parameters.
The report provides insight on the following pointers:
-Analysis of key drivers (Government incentives and OEM investments accelerate EV battery demand, Advancements in battery technologies leading the charge for EV battery market, Government strategies for EV adoption driving battery market boom, Declining EV battery prices boost market accessibility and growth), restraints (Geopolitical instabilities and supply chain disruptions pose risks to EV battery expansion, Charging infrastructure deficit hinders EV adoption in emerging economies, Emergence of alternative fuels to create a potential restraint for the EV batteries), opportunities (The growing role of Battery-as-a-Service in EV battery market boom, Innovative solid-state batteries creating new growth prospects for the EV battery, ESS advancements creating new paths for EV battery market growth), and challenges (High initial costs hindering the proliferation of the EV battery market, Lithium shortages jeopardizing the growth of the EV battery, Safety concerns hindering the expansion of the EV battery market, Cost disparity Between EVs and conventional vehicles to create a hurdle for EV battery expansion)
-Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the EV Battery market.
-Market Development: Comprehensive information about lucrative markets - the report analyses the EV Battery market across varied regions.
-Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the EV Battery market.
-Competitive Assessment: In-depth assessment of market share, growth strategies, and service offerings of leading players like Contemporary Amperex Technology Co., Limited (China), BYD Company Ltd. (China), LG Energy Solution Ltd. (South Korea), CALB (China), and SK Innovation Co., Ltd. (South Korea) among others in EV Battery market.

Table of Contents:

EV Battery Market by Battery Type (Li-ion, NiMH, SSB), Vehicle Type (PC, Vans/Light Truck, MHCV, Bus & OHV), Propulsion, Battery Form, Material Type, Battery Capacity, Method, Li-ion Battery Component, and Region - Global Forecast to 2035

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