

Battery as a Service Market by Leasing Type (Subscription, Pay-per-use), Usage (Private, Commercial), Vehicle Type (Two-wheelers, Three-wheelers, Passenger Cars, Commercial Vehicles), Battery Capacity, and Region - Global Forecast to 2035

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Abstracts

The global battery as a service market is projected to reach USD 0.66 billion in 2024 to USD 14.45 billion in 2035, at a CAGR of 32.4% from 2024-2035. The commercial adoption of electric cars is expected to rise, driven by the cost savings and operational efficiency offered by the battery as a service model. This model helps lower operating costs, reduce downtime, and improve fleet performance. In Europe, where 40-60% of EV sales are for fleet use, battery leasing is likely to become a highly attractive option once battery prices stabilize. Additionally, the growing demand for electric three-wheelers in last-mile delivery and public transport, especially in rapidly urbanizing areas, is boosting the adoption of battery leasing services.

'Three-wheelers segment is expected to grow at the fastest rate in the battery as a service market during the forecast period.'

The three-wheelers segment is projected to exhibit the highest growth during the forecast period, primarily driven by the rapid adoption of electric three-wheelers and delivery vehicles in emerging markets such as India. The cost-effectiveness offered by battery leasing service and the need for affordable and sustainable transportation solutions fuel this growth. Mahindra Last Mile Mobility (India) has been offering battery leasing solutions for its Zor Grand and Treo Plus three-wheeler models in India since 2024. In December 2024, the company partnered with VidyutTech (India) to introduce a

battery as a service offering for its three-wheeler commercial electric vehicles, with a aim to make EV ownership more affordable by providing a pay-as-you-go battery rental service, starting at just Rs 2.50 per kilometer. Similarly, in September 2024, Neuron Energy (India) partnered with Pointo (India) to lease lithium-ion batteries for commercial e-rickshaws. Neuron Energy to supply up to 12,000 high-capacity 5.1-kWh lithium-ion batteries for L3 category e-rickshaws, replacing lead-acid batteries. Further, in April 2024, Neuron Energy partnered with Urja Mobility (India) to lead the battery leasing model for e-rickshaws, commonly known as 'toto,' in Kolkata. Together, the companies aimed to establish a fleet of 5 million e-rickshaws across the country. Likewise, in March 2024, Sun Mobility (India) and Revfin (India) partnered to finance and deploy nearly 100,000 electric two- and three-wheelers under the battery as a service model.

'Commercial segment is expected to grow at the fastest rate in the battery as a service market during the forecast period.'

Battery leasing is witnessing rapid growth in the commercial segment, driven by the cost efficiency and operational flexibility it offers to fleet operators. Using the leasing options, the commercial fleet owners can lower their initial investment costs and reduce concerns regarding battery degradation. Fleet usage for cars is expected to grow faster, as the value proposition is especially beneficial for fleet operators who can capitalize on lower costs and streamlined operations. In Europe, where 40-60% of EVs are sold to fleets, battery leasing solutions presents a strong value proposition for cars, particularly as battery prices stabilize. Similarly, in India, MG introduced a value proposition of USD 11,557 (Rs. 10 lakh) for fleet providers. Further, electric three-wheelers which are mostly used for commercial purposes, are gaining momentum in countries such as India and China. Similarly, in December 2024, Mahindra Last Mile Mobility (India), in partnership with VidyutTech (India), introduced a battery leasing program for Mahindra ZEO (4W), the Zor Grand, and Treo Plus (3Ws). Likewise, Jiangsu Hanbang Vehicle Industry Co., Ltd. (China) offers a battery leasing option for select models of Meidi three-wheeler vehicles.

'Europe is expected to grow at the fastest rate in battery as a service market during the forecast period.'

Europe's electric vehicle market has grown substantially, driven by environmental awareness, stringent emission regulations, and significant government incentives. With major cities implementing low-emission zones and the EU aiming to meet its 2030 sustainability targets, the region's demand for electric mobility is accelerating. The UK,

Germany, and France are leading this transition, with the UK becoming Europe's largest EV market in 2024, bolstered by policy shifts like the Zero Emission Vehicle (ZEV) mandate. The challenges of high upfront costs and limited infrastructure create a promising opportunity for the growth of the battery as a service market in Europe. Additionally, as the region pushes for strict emission targets and a shift away from internal combustion engine vehicles, the growth of the battery service market is expected to increase in the coming years. NIO (China), Renault Group (France), Yamaha Motor Co., Ltd. (Japan), and Switch Mobility (UK) are some of the OEMs providing battery as a service solution with their vehicle models. VinFast for instance, is offering battery subscription service in its VF8 and VF9 vehicle models since 2022 in European markets such as Germany, France and Netherlands. Similarly, NIO is offering battery leasing service in its ET5, ET7, EL6, EL7 vehicle models in Germany since 2023.

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 – 27%, Tier II – 21%, and OEMs – 52%

By Designation: C-Level – 48%, D-Level – 36%, and Others – 16%

By Region: Asia Pacific – 42%, North America – 28%, and Europe – 30%

The battery as a service market is dominated by major players, including NIO (China), Gogoro (Taiwan), XPENG INC. (China), SAIC Motor Corporation Limited (China), and Vinfast (Vietnam) and more. These companies are expanding their portfolios to strengthen their battery as a service market position.

Research Coverage:

The report covers the battery as a service market in terms of Leasing Type (Subscription, Pay-per-use), Usage (Private, Commercial), Vehicle Type (Two-wheelers, Three-wheelers, Passenger Cars, Commercial Vehicles), Battery Capacity (Below 5 KWH, 5–10 KWH, 11–50 KWH, 51–100 KWH, above 100 KWH), and Region. It covers the competitive landscape and company profiles of the significant battery as a service market player.

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 battery as a service 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 battery as a service market.

The report will help market leaders/new entrants with information on various trends in battery as a service market based on leasing type, usage, vehicle type, and other parameters.

The report provides insight on the following pointers:

Analysis of key drivers (Ease of EV ownership with battery leasing, Integration of battery swapping service), restraints (Limited scope in North America and Europe for two-wheeler & three-wheeler segments, Limited scope in private vehicle segment), opportunities (Increasing reliance on micro-mobility, Second-life battery storage, Expansion of battery leasing in industrial and commercial applications), and challenges (Dependency on battery asset companies, Shortage of lithium for use in EV batteries, Limited standardization in battery technology)

Service Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new service offerings in the battery as a service market.

Market Development: Comprehensive information about lucrative markets - the report analyses the battery as a service market across varied regions.

Market Diversification: Exhaustive information about new services, untapped geographies, recent developments, and investments in the battery as a service market.

Competitive Assessment: In-depth assessment of market share, growth strategies, and service offerings of leading players like NIO (China), Gogoro (Taiwan), XPENG INC. (China), SAIC Motor Corporation Limited (China), and Vinfast (Vietnam), among others in battery as a service market.

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