

Global Battery as a Service Market Size Study & Forecast, By Vehicle Type (Two-Wheeler, Three-Wheeler, Passenger Vehicle, and Commercial Vehicle), By Service (Battery Subscription and Pay-Per-Use), and Regional Analysis, 2023-2030

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Abstracts

Global Battery as a Service Market is valued at approximately USD 1.14 billion in 2022 and is anticipated to grow with a healthy growth rate of more than 21.4% over the forecast period 2023-2030. Battery as a Service (BaaS) in the automotive sector is a novel business model that presents an alternative to traditional electric vehicle (EV) ownership by separating the acquisition and maintenance of EV batteries from the vehicle itself. BaaS offers consumers the flexibility to lease or subscribe to EV batteries independently unlike the conventional EV ownership model where the battery is bundled with the vehicle's purchase price. This innovative approach aims to mitigate common challenges associated with EV adoption, such as high concerns about battery lifespan and degradation (especially for electric cars), and the need for convenient charging infrastructure. Various stakeholders contribute to this evolving market, including automakers, battery manufacturers, energy service providers, startups, and tech giants. The Battery as a Service Market is expanding because of factors such as increasing government initiatives, rising awareness of environmental issues, soaring demand for sustainable solutions, and rising focus on circular economy. BaaS integrates with the automotive sector's overarching transition towards sustainable transportation solutions, addressing consumer apprehensions regarding EV affordability and charging convenience.

In addition, the market is experiencing significant expansion, largely driven by the surging popularity of electric vehicles (EVs). Governments across the globe are implementing stringent emissions standards to combat air pollution and greenhouse gas

emissions. EVs, which boast zero tailpipe emissions play a major role in meeting these regulatory mandates. The rapid rise of EVs is directly influencing the market growth. According to the International Energy Agency, China is leading with the highest battery electric vehicles (BEVs) stock followed by Europe and the United States. In 2020, it was estimated that nearly 3.5 million Battery Electric Vehicles (BEVs) were stocked in China, which reached 6.2 million in 2021. Also, approximately 1.8 million BEVs were stocked in Europe and 1.1 million in the United States, which will increase to 3 million in Europe and 1.3 million in the United States by 2021. Various automakers are increasingly focusing on the introduction of effective EV models as governments worldwide enforce stricter emissions regulations and consumers are inclined towards eco-conscious transportation alternatives. Battery as a Service (BaaS) emerges as a solution to mitigate the substantial upfront costs associated with EV ownership by decoupling the battery expense from the vehicle's purchase price. Thus, the rising adoption of electric vehicles is directly fostering the growth of the battery as a service market. Moreover, the rise in the development of advanced battery technologies, as well as the increasing expansion of charging infrastructure present various lucrative opportunities over the forecast years. However, the limited availability of battery swapping infrastructure and the high initial investment are challenging the market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global Battery as a Service Market study include Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. Asia Pacific dominated the market in 2022 owing to the surge in electric vehicle (EV) adoption, encompassing both passenger EVs and commercial electric vehicles. The growing popularity of EVs has propelled the demand for BaaS solutions, providing a cost-effective solution for range anxiety and lowering upfront costs for consumers and fleet operators. Furthermore, various countries across the Asia Pacific region are implementing policies and incentives to encourage electric mobility and curb emissions. These initiatives include EV subsidies, tax benefits, and regulations promoting the development of charging infrastructure and battery-swapping facilities. Such conducive regulatory environments are fostering the growth of BaaS models in the region. Whereas North America is expected to grow at a substantial CAGR over the forecast years. The rise in the adoption of battery vehicles, favourable government support, and stringent emission standards are significantly propelling the market demand across the region. BaaS models are gaining prominence as a means to overcome the cost barriers associated with EV ownership in the region.

Major market players included in this report are:

NIO Power (China)

Gogoro Inc. (Taiwan)

Immotor Inc. (China)

SUN Mobility Private Limited (India)

Upgrid Solutions Private Limited (India)

Numocity Technologies Private Limited (India)

Ample Inc. (U.S.)

Bounce Infinity Private Limited (India)

Esmito Solutions Private Limited (India)

Octillion Power Systems Pvt Ltd. (India)

Recent Developments in the Market:

In July 2023, Nio launched an upgraded battery leasing program that allows drivers to swap their battery packs for higher energy-density ones daily. This marks a departure from the previous practice of waiting months or years for such upgrades. Additionally, the company has expanded its recharging network.

In July 2023, Kia Corporation, headquartered in South Korea, announced its collaboration with several local companies to launch a trial electric vehicle (EV) battery subscription program.

In April 2023, Gogoro initiated its rapid six-second battery swapping services in India and unveiled a new smart scooter specifically designed for the B2B (business-to-business) market.

In February 2023, Magna and Yulu jointly introduced YUMA ENERGY, a battery-swapping network tailored for electric two-wheelers. This battery-as-a-service network is aimed at supporting Yulu's fleet and is available for use by other Original Equipment Manufacturers (OEMs) and mobile operators.

Global Battery as a Service Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered - Vehicle Type, Service, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent to up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define the market sizes of different segments & countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters to detailed information about the crucial aspects such as driving factors & challenges that will define the future growth of the market. Additionally, it also incorporates potential opportunities in micro markets for stakeholders to invest along with a detailed analysis of the competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

By Vehicle Type:

Two-Wheeler

Three-Wheeler

Passenger Vehicle

Commercial Vehicle

By Service:

Battery Subscription

Pay-Per-Use

By Region:

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

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