

# Electric Vehicle Battery Swapping Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028F Segmented By Service Type (Subscription Model, and Pay-Pre-Use-Model), By Vehicle Type (Two-Wheeler, Three-Wheeler), and By Region

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## Abstracts

Global electric vehicle battery swapping market size has shown growth in the past years, and it is anticipated to increase at a high rate in the forecast year 2023E-2028F. In recent years the adoption of electric vehicles has increased in many countries across the globe; according to the IEA (International Energy Agency) data, around 6.9 million electric vehicles sales were recorded in the year 2021 as the main powerhouse of an electric vehicle is a battery, increased sales of electric vehicle will drive the sales of an electric vehicle as well.

Battery plays an important role in electric vehicles as most of the function of an electric vehicle is demanded on the battery; due to the heavy use of the battery, it needs to be charged within a certain timeframe, and swapping batteries are an option for the buyers as they can be used at any time in an emergency. By this, the global electric vehicle battery swapping market share is anticipated to grow in the forecasted year.

### Government policies and incentives

Many countries' governments have implemented various policies and incentive plans to increase the adoption of electric vehicles among vehicle buyers. The governments of the US have implemented various policies and incentives, such as on the purchase of all-new electric, plug-in hybrid, and fuel cell electric vehicles, which may be eligible for a

federal income tax credit of up to USD 7,500 under some criteria. This initiative will help in the adoption of electric vehicles and support the growth of the battery-swapping market; apart from incentives, the government also offers tax credits, rebates, and grants for electric vehicle purchases, charging infrastructure development, and research and development of battery technologies. By all these, the global electric vehicle battery swapping market growth will be seen in the coming years.

Some of the major trends in the electric vehicle battery swapping market are-

**Battery Swapping is easy for Convenience.**

Battery swapping provides an easy and quick way to recharge electric vehicles (EVs) without having to wait for a long time for the battery to charge. This makes it more convenient for EV owners, especially those who live in urban areas where charging stations may be hard to find. Also, the owners of electric vehicles have concerns over the range of their vehicle's battery, as most electric vehicle battery offers a limited range due to which the buyer's heritage before buying an electric vehicle. Battery swapping provides a solution to this problem by allowing EV owners to quickly replace their depleted batteries with fully charged ones, enabling them to travel long distances.

**Increasing Environmental Concerns**

Since automobiles that run on non-renewable sources of energy emit carbon dioxide (CO<sub>2</sub>) as one of the main greenhouse gases, these greenhouse gas emissions can trap additional heat coming from the sun in the earth's atmosphere, which causes the 'greenhouse effect' and climate change. The greenhouse effect leads to increasing global temperatures causing global warming. Higher temperatures worsen many types of disasters, including storms, wildlife extinction rates, quality of air, and heat waves, and lead to higher sea levels, floods, and droughts. Due to the growing environmental concerns, the size of the electric vehicle fleet across the world is expected to increase at a rapid growth rate, driving the global electric vehicle battery swapping market during the forecast period.

**Cost-Effectiveness of Battery Swapping**

Battery swapping provides a faster and more convenient alternative to traditional charging methods. Swapping batteries takes only a few minutes, compared to several hours for charging electric vehicles using conventional methods. One of the main factors for electric vehicle drivers is the range of the battery, as the long-distance

battery needs to be recharged again after a certain period. Battery swapping provides a solution to the range problem, as drivers can swap their depleted battery for a fully charged one, which allows them to continue their journey without having to wait to recharge the battery.

Battery swapping is also a cost-effective solution for electric vehicle fleet operators and other businesses that rely on electric vehicles. Swapping batteries comes as an alternative option for electric vehicle owners as it reduces downtime and increases vehicle utilization, resulting in lower operational costs. These factors act as the electric vehicle battery swapping market trends, which will increase the sales of swapping batteries in various countries in the coming years.

### Rising Number of Electric Vehicles

There are numerous advantages to owning an electric vehicle over a diesel or petrol vehicle, such as the cost per km is low in electric vehicles compared to diesel or petrol vehicles. Electric vehicles have fewer mechanical components and do not require as much servicing and maintenance as gasoline-powered vehicles. By seeing various advantages of electric vehicles, buyers prefer to buy EVs, as the sales of EVs will increase the requirement for the charging station. Battery swapping can provide a quick and efficient solution to this problem, enabling EV owners to recharge their vehicles in a matter of minutes.

In many countries, swapping batteries for electric vehicles is a new trend; many countries are still having a lower number of battery charging stations, and people have to go to charging stations to charge the battery; seeing this, battery manufacturers have started to introduce swapping battery as an alternative solution. Moreover, In China, the average cost to create a switching station is 3 million yuan (USD 450,000). The cost of building a battery-swap-ready EV is about 65,000 yuan (USD 9,700), higher than the cost of building a standard EV with a non-swappable battery.

By 2025, 24,000 swapping stations will be installed across the nation, increasing from the current 1400 swapping stations, according to projections by Chinese automakers NIO and Geely, battery swap developer Aulton, and state-owned oil producer Sinopec. All these factors are acting in a positive way in increasing sales of swapping batteries in the global electric vehicle battery swapping market across various countries. To this factor, the global electric vehicle battery swapping market is anticipated to witness growth in the next five years.

## Market Segmentation

The global electric vehicle battery swapping market is segmented based on service type, vehicle type, region, and competition landscape. Based on service type, the market is further fragmented into the subscription model and pay-pre-use-model. Based on vehicle type, the market is divided into two-wheeler, three-wheeler, passenger cars, and commercial vehicles.

## Company Profiles

Amplify Cleantech Solutions Private Limited, Amara Raja Battery Limited, Esmito Solutions Pvt Ltd, EChargeUp Solutions Pvt Ltd Inc, Lithion Power Pvt Ltd, Numocity Technologies Pvt Ltd, Panasonic India Pvt. Ltd, PowerSwap Ab, Revolt Motors, and Nio Inc. are among the major market players in the global electric vehicle battery swapping market.

## Report Scope:

In this report, the Global Electric Vehicle Battery Swapping market has been segmented into the following categories, in addition to the industry trends, which have also been detailed below:

### Electric Vehicle Battery Swapping Market, By Service Type

Subscription Model

Pay-Pre-Use-Model

### Electric Vehicle Battery Swapping Market, By Vehicle Type:

Two-Wheeler

Three-Wheeler

### Electric Vehicle Battery Swapping Market, By Region:

North America

The United States

Canada

Mexico

Europe

Germany

Spain

Russia

France

United Kingdom

Slovakia

Italy

Asia-Pacific

China

India

Japan

South Korea

Indonesia

Thailand

Malaysia

Vietnam

## South America

Brazil

Argentina

Colombia

## Middle East & Africa

Turkey

South Africa

Egypt

## Competitive Landscape

**Company Profiles:** Detailed analysis of the major companies present in the global electric vehicle battery swapping market.

## Available Customizations:

With the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

## Company Information

Detailed analysis and profiling of additional market players (up to five).

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