

India Battery as a Service (BAAS) Market Size Analysis - Market Share, Forecast Trends and Outlook Report (2025-2034)

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Report description:

The India battery as a service (BAAS) market was valued at USD 86.50 Billion in 2024. The industry is expected to grow at a CAGR of 18.70% during the forecast period of 2025-2034. Environmental sustainability and increased concerns about air pollution are driving the demand for electric vehicles in India, further stimulating the need for BAAS solutions to make EV adoption more accessible. In turn, all these factors have resulted in the market attaining a valuation of USD 480.31 Billion by 2034.

India Battery as a Service (BaaS) Market Report Summary

Description

Value

Base Year

USD Billion

2024

Historical Period

USD Billion

2018-2024

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Forecast Period

USD Billion

2025-2034

Market Size 2024

USD Billion

86.50

Market Size 2034

USD Billion

480.31

CAGR 2018-2024

Percentage

XX%

CAGR 2025-2034

Percentage

18.70%

CAGR 2025-2034- Market by Region

North India

19.4%

CAGR 2025-2034 - Market by Battery Capacity

Less Than 50 kWh

23.4%

CAGR 2025-2034 - Market by Service Providers

OEMs

21.3%

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Market Share by Region 2024

East India

18.7%

India Battery as a Service (BAAS) Market Overview

The electrification of India by 2030 is expected to attain new heights by increasing support for sustainability by subsidies for electric vehicle (EV) adoption. Key drivers for the India battery as a service market growth are reducing the cost of ownership and cutting down the charging time with extended battery life. BaaS companies offer flexible battery leasing models, allowing consumers to swap traditional charging for a better runtime at designated stations. Companies like Ather Energy and Bounce are expanding their networks to serve both urban and rural markets. Also, the challenges around battery technology and battery swapping are likely to get resolved soon, leading to market expansion.

India Battery as a Service (BAAS) Market Growth

The two-wheeler industry is expanding at a rapid pace due to rising urbanization and increased disposable incomes. In turn, this has resulted into a niche driving tremendous demand in the India battery as a service market. Consumers have increasingly turned to electric scooters and motorcycles due to skyrocketing fuel prices and ever-increasing congestion in urban areas. BaaS providers can take this opportunity to offer in-house easy, convenient, and affordable battery swaps that would allow customers with minimum upfront investment to access the EV market. Moreover, while the rise of e-commerce and last-mile delivery service in India raises the demand for electric vehicles in commercial fleets, companies offering BaaS solutions are poised to offer flexible battery leasing and swapping services that would enable fleet operators to lower their operating costs while increasing reliability, which accelerates the adoption of e-logistics solutions in India's competitive market.

Key Trends and Recent Developments

The key trends of the India battery as a service (BAAS) market include government support, the expansion of swapping infrastructure, strategic partnerships in fleets, and advancement in battery technologies, making EV adoption sustainable.

January 2025

The French climate-tech company BE Energy and Hyderabad-based electric two-wheeler maker PURE EV formed a strategic alliance to develop cutting-edge lithium-ion battery conditioning technology.

December 2024

A new partnership between Mahindra Last Mile Mobility (MLMML) and Vidyut has been announced to deliver battery-as-a-Service financing for electric vehicles. The goal of this creative idea is to lower the initial cost of electric cars, such as Mahindra's ZEO (4W), Zor Grand, and Treo Plus (3Ws).

October 2024

The new Battery Passport System was unveiled by ChargeZone, an EV charging network in India. This digital platform collects thorough data at every stage of a battery's lifecycle to offer a detailed record.

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September 2024

JSW MG Motor India and Vidyut, a Bengaluru-based business that specializes in a full-stack electric vehicle (EV) ecosystem, have teamed up to introduce a passenger car finance strategy.

Expansion of Swapping Stations

With the exponential rise in demand for EVs in India, a significant impetus is being put on setting up battery swapping stations. Companies like Bounce and Ather Energy are developing several networks of quick battery replacement facilities for electric 2-wheelers and scooters so that downtime is minimized while offering convenience to users. This major trend is significantly boosting the growth of India battery as a service market. This development of infrastructure is crucial to supporting the scalability of electric mobility, particularly in urban areas with limited charging stations.

Government Support and Policy Incentives

One of the major trends driving development in the India battery as a service market is incentivized sustainable transportation adopted by the government through initiatives such as FAME-II. This government policy supports the adoption of electric vehicles and establishing battery swapping stations. Hence, companies can benefit from subsidies and tax breaks, which will expedite adoption of these solutions, as step towards green mobility innovation.

Partnerships with Fleet Operators

Businesses have begun forming best form partnerships with fleet operators to advance the adoption of battery as a service in India, more particularly in the commercial sectors. For example, Ola Electric has collaborated with local businesses to provide battery swapping services for their electric vehicle fleets. These partnerships create steady demand for BaaS providers and help fleet operators reduce operational costs. This trend extends BaaS demand from the individual consumer into the commercial and business markets.

Innovations in Battery Technology

Technological advances in design and performance are boosting the India battery as a service market trends and dynamics. To ensure they last longer, are cost-effective, and charge better, research is being done on battery technology by many companies such as Exide Industries. As batteries become durable and cost-effective, consumers and businesses will find BaaS increasingly attractive, leading to further market growth.

India Battery as a Service (BAAS) Market Opportunities

The growth in EV adoption in the rural regions, provides ample opportunities for the India battery as a service market companies to meet the needs of these untapped markets. This can be achieved through establishing localized battery swapping stations with affordable lease offerings, which in effect would allow the companies to tap into the ever-growing demand far out of urban centers for electric mobility and thereby promote sustainable transport solutions in far-flung areas. Moreover, companies can take advantage of the combination of any renewable energy integration with electric vehicles with BaaS by integrating solar or wind power with battery swapping stations. Therefore, the operation will have less dependence on the grid, operational costs will be low, and it will appeal to eco-conscious consumers, ensuring that the sustainability of the BaaS model is upheld.

India Battery as a Service (BAAS) Market Trends

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A key driver for the demand in battery as a service market in India is the reduction in the overall cost of electric vehicle ownership. Consumers are given the option of just leasing a battery; hence, it considerably brings the price of electric vehicle ownership down. This model is most viable for developing markets since a larger demographic can access electric mobility. In addition, encouraged by the Indian government's strong campaign for clean energy initiatives such as the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) initiative, the BaaS market is growing to a great extent. With the ongoing stimulus to persuade usage of electric vehicles, companies are prompted to invest in BaaS infrastructure and media for growth, which also supports India's drive toward a greener future.

India Battery as a Service (BAAS) Market Restraints

- The inadequacy of battery-swap stations and charging infrastructure throughout the country, especially in rural areas, hampers smooth adoption of a BaaS for all customers, thereby challenging the India battery as a service market growth.
- The initial costs incurred for battery procurement by BaaS providers remain high, thus affecting the pricing model and profitability. The financial barrier.

India Battery as a Service (BAAS) Industry Segmentation

The EMR's report titled "India Battery as a Service (BAAS) Market Report and Forecast 2025-2034" offers a detailed analysis of the market based on the following segments:

Market Breakup by Type

- Subscription Model
- Pay-Per-use Model

Market Breakup by Battery Capacity

- Less Than 50 kWh
- 50 - 100 kWh
- Above 100 kWh

Market Breakup by Usage

- Private
- Commercial

Market Breakup by Vehicle Type

- Two-Wheelers
- Three-Wheelers
- Passenger Cars
- Commercial Vehicles

Market Breakup by Service Provider

- OEM

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- Aftermarket

Market Breakup by Region

- North India
- East India
- West India
- South India

India Battery as a Service (BAAS) Market Share

Market Insights by Type

The BaaS subscription model has increasingly turned out to be popular among the younger population of EV owners as it offers them fixed battery-lease costs with assured convenience and long-term affordability for daily commutes. This has significantly boosted the India battery as a service market value. The second option available is the Pay-Per-Use Model, which, due to flexibility of payment and features like pay-per-use and charging, is luring commercial operators and users with infrequent requirements. These models provide cater to consumer's requirements, thereby providing the BaaS firms with a chance to serve diverse market segments through their products while enhancing the adoption of EV across India.

Market Analysis by Battery Capacity

The battery capacity segment can be categorized into less than 50 kWh, 50-100 kWh, and above 100 kWh. These have collectively boosted the India battery as a service demand. Urban mobility and cost efficiency are key drivers for the <50 kWh segment. The 50-100 kWh segment is boosted by the growth of electric two-wheelers and commercial vehicles as this segment strikes a balance between cost and range. Adoption for the above 100 kWh is due to electric buses, trucks, and bigger fleets of commercial vehicles that fulfill long-range and high-capacity requirements supporting the country's quest for cleaner transport and sustainability.

Analysis by Usage

The Private use segment in the India battery as a service market is gaining steady ground due to the increasing adoption of electric two-wheelers and cars led by rising environmental concerns and government subsidy support. Consumers are drawn to the low-cost and convenience of the battery lease. The commercial segment is growing with the building of electric fleets in sectors such as logistics and rideshare with the rising requirement of delivery services. BaaS solutions have hence become increasingly appealing for minimizing downtime, thus being highly lucrative for businesses in their transition to electric vehicles.

Market Insights by Vehicle Type

Two-wheelers hold the major share in the India battery as a service market. This segment growth is being driven by the high acceptance of electric scooters and bikes as they are affordable and highly appropriate for urban mobility. The sector of three-wheelers is gaining popularity, driven by the increasing market for electric auto-rickshaws across passenger and cargo segments, offering a cost-effective last-mile delivery solution. BaaS is increasingly being adopted in passenger cars in a bid to reduce upfront costs for EVs. BaaS also benefits commercial vehicles by helping reduce fleet operating costs, as businesses can lease batteries for heavy-duty electric trucks.

Market Insights by Service Provider

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As per the India battery as a service industry analysis, OEMs are experiencing major growth by combining battery leasing and swapping solutions into their offerings of electric vehicles, permitting consumers to avail battery services while purchasing a vehicle and hence, reducing up-front costs. Aftermarket service providers are also gaining momentum as they offer flexible BaaS models to third-party EV owners. These are relatively cheaper and fairly convenient for building infrastructure and battery and management capabilities across all vehicle types.

India Battery as a Service (BAAS) Market Regional Analysis

North India Battery as a Service (BAAS) Market Opportunities

The major driver for demand for battery as a service in North India remains the rapid growth of cities in Delhi, Chandigarh, and Lucknow. High levels of pollution along with government incentives are increasing the adoption of EVs and more specifically of electric two-wheelers, further driving demand for BaaS infrastructure. The region's developing infrastructure for electric mobility, combined with the increasing emphasis on environment-friendly solutions, is pushing up the adoption of battery swapping services for both commercial and private vehicles.

East India Battery as a Service (BAAS) Market Outlook

The East India battery as a service market witnesses steady growth in like Kolkata, Bhubaneswar, and Ranchi, due to increased awareness of electric vehicles as well as governmental support for EV adoption. The commercial and transportation sectors of this region are moving towards electric three-wheelers and two-wheelers, and due to this demand, there is a requirement for flexible battery leasing models. In the infrastructure front, the region is still evolving but pollution reduction projects are creating pressure for sustainable solutions for mobility thereby increasing the size of BaaS services in this region.

CAGR 2025-2034- Market by

Region

North India

19.4%

West India

18.9%

East India

XX%

South India

XX%

West India Battery as a Service (BAAS) Market Growth

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West India, with cities like Mumbai, Pune, and Ahmedabad, is witnessing an increasing demand in the battery as a service market, which is being fueled by government initiatives and the strong automotive and logistics sectors in the region. BaaS providers are expanding their networks to support businesses and consumers as electric vehicles become increasingly popular for last-mile delivery and urban commuting. The push for clean air, coupled with commercial fleet electrification, is creating significant demand for cost-effective and scalable battery-swapping solutions that could be scaled up in high-traffic urban areas.

South India Battery as a Service (BAAS) Market Insights

The South India battery as a service market experiences consistent growth, as cities like Bangalore, Chennai, and Hyderabad are increasingly adopting BAAS. The region has a booming technology ecosystem, a greater number of EV manufacturers, and a government boasting more progressive policies promoting electric mobility. BaaS providers are expanding rapidly with a strong consumer base and high urban density that facilitates convenient battery swapping stations. This progressive region is driving towards sustainable transportation, which aligns well with the BaaS solution. Thus, this is an important market for adoption of electric two-wheelers and commercial vehicles.

Competitive Landscape

India battery as a service (BAAS) market players are focusing on increasing battery swapping infrastructure, increasing the affordability of enabling EV ownerships, and improving battery technologies. India battery as a service (BAAS) companies are providing flexible, cost-effective solutions to consumers and businesses alike, enhancing EV adoption while also advancing sustainable transportation goals through efficient, scalable services.

SUN Mobility Private Limited

Founded in 2017, SUN Mobility is an electric vehicle energy services firm that designs, builds, and manages battery swapping infrastructure for bigger commercial vehicles, electric two-wheelers, and three-wheelers. Because electric vehicles are less expensive to buy and operate, especially in business settings, battery swapping technology contributes to the quicker adoption of electric vehicles.

Upgrid Solutions Private Limited

Founded in 2019, Upgrid Solutions offers energy solutions with an emphasis on EV charging infrastructure and battery replacement.

Numocity

Founded in 2018, Numocity is a software startup that offers cutting-edge solutions for the electric vehicle and charging infrastructure industries, thereby facilitating sustainable transportation. By using Numocity's white-label EV charging software solution to create their own EV charging brand, the software seeks to optimize charging infrastructure management for operators, enhance the charging experience for EV owners, and seamlessly incorporate EVs into daily life.

Bounce Electric 1 Private Limited

Based in Gurugram, Haryana, India, Bounce Electric 1 Private Limited is a registered firm that was established in 2016. The company's mobility solutions and battery swapping are revolutionizing the sharing of electric scooters.

Other key players in the India battery as a service (BAAS) market report are JSW MG Motor India Pvt. Ltd., among others.

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Startup Scenario in the India Battery as a Service (BAAS) Market

Innovative startups are increasingly focusing on transforming the market dynamics by combining electric mobility with battery swapping solutions. They are attempting to reduce upfront costs of vehicles, and to enhance EV adoption, by marketing the vehicle's cost-effective and sustainable features for long run usage.

Yulu Bikes Pvt. Ltd.

The Indian company Yulu Bikes Pvt. Ltd., with its main office in Bengaluru, offers shared low-speed two-wheeler electric vehicle (EV) services in Bengaluru, Mumbai, Navi Mumbai, Delhi, Gurugram, Noida, and Hyderabad. With more than four million customers, Yulu runs 45,000 dockless shared EVs. Yulu users have made 160 million green deliveries and contributed to the reduction of 27 million kg of CO2 emissions.

Table of Contents:

- 1 Executive Summary
 - 1.1 Market Size 2024-2025
 - 1.2 Market Growth 2025(F)-2034(F)
 - 1.3 Key Demand Drivers
 - 1.4 Key Players and Competitive Structure
 - 1.5 Industry Best Practices
 - 1.6 Recent Trends and Developments
 - 1.7 Industry Outlook
- 2 Market Overview and Stakeholder Insights
 - 2.1 Market Trends
 - 2.2 Key Verticals
 - 2.3 Key Regions
 - 2.4 Supplier Power
 - 2.5 Buyer Power
 - 2.6 Key Market Opportunities and Risks
 - 2.7 Key Initiatives by Stakeholders
- 3 Economic Summary
 - 3.1 GDP Outlook
 - 3.2 GDP Per Capita Growth
 - 3.3 Inflation Trends
 - 3.4 Democracy Index
 - 3.5 Gross Public Debt Ratios
 - 3.6 Balance of Payment (BoP) Position
 - 3.7 Population Outlook
 - 3.8 Urbanisation Trends
- 4 Country Risk Profiles
 - 4.1 Country Risk
 - 4.2 Business Climate
- 5 India Battery as a Service Market Analysis
 - 5.1 Key Industry Highlights

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5.2 India Battery as a Service Historical Market (2018-2024)

5.3 India Battery as a Service Market Forecast (2025-2034)

6 India Battery as a Service Market by Type

6.1 Subscription Model

6.1.1 Historical Trend (2018-2024)

6.1.2 Forecast Trend (2025-2034)

6.2 Pay-Per-Use Model

6.2.1 Historical Trend (2018-2024)

6.2.2 Forecast Trend (2025-2034)

7 India Battery as a Service Market by Battery Capacity

7.1 Less Than 50 kWh

7.1.1 Historical Trend (2018-2024)

7.1.2 Forecast Trend (2025-2034)

7.2 50 - 100 kWh

7.2.1 Historical Trend (2018-2024)

7.2.2 Forecast Trend (2025-2034)

7.3 Above 100 kWh

7.3.1 Historical Trend (2018-2024)

7.3.2 Forecast Trend (2025-2034)

8 India Battery as a Service Market by Usage

8.1 Private

8.1.1 Historical Trend (2018-2024)

8.1.2 Forecast Trend (2025-2034)

8.2 Commercial

8.2.1 Historical Trend (2018-2024)

8.2.2 Forecast Trend (2025-2034)

9 India Battery as a Service Market by Vehicle Type

9.1 Two-Wheelers

9.1.1 Historical Trend (2018-2024)

9.1.2 Forecast Trend (2025-2034)

9.2 Three-Wheelers

9.2.1 Historical Trend (2018-2024)

9.2.2 Forecast Trend (2025-2034)

9.3 Passenger Cars

9.3.1 Historical Trend (2018-2024)

9.3.2 Forecast Trend (2025-2034)

9.4 Commercial Vehicles

9.4.1 Historical Trend (2018-2024)

9.4.2 Forecast Trend (2025-2034)

10 India Battery as a Service Market by Service Provider

10.1 OEM

10.1.1 Historical Trend (2018-2024)

10.1.2 Forecast Trend (2025-2034)

10.2 Aftermarket

10.2.1 Historical Trend (2018-2024)

10.2.2 Forecast Trend (2025-2034)

11 India Battery as a Service Market by Region

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- 11.1 East India
 - 11.1.1 Historical Trend (2018-2024)
 - 11.1.2 Forecast Trend (2025-2034)
- 11.2 West India
 - 11.2.1 Historical Trend (2018-2024)
 - 11.2.2 Forecast Trend (2025-2034)
- 11.3 North India
 - 11.3.1 Historical Trend (2018-2024)
 - 11.3.2 Forecast Trend (2025-2034)
- 11.4 South India
 - 11.4.1 Historical Trend (2018-2024)
 - 11.4.2 Forecast Trend (2025-2034)
- 12 Market Dynamics
 - 12.1 SWOT Analysis
 - 12.1.1 Strengths
 - 12.1.2 Weaknesses
 - 12.1.3 Opportunities
 - 12.1.4 Threats
 - 12.2 Porter's Five Forces Analysis
 - 12.2.1 Supplier's Power
 - 12.2.2 Buyer's Power
 - 12.2.3 Threat of New Entrants
 - 12.2.4 Degree of Rivalry
 - 12.2.5 Threat of Substitutes
 - 12.3 Key Indicators of Demand
 - 12.4 Key Indicators of Price
- 13 Value Chain Analysis
- 14 Cost Analysis
 - 14.1 Energy Cost
 - 14.2 SWAP Cost
- 15 Policy and Regulatory Frameworks
 - 15.1 Subsidies and Incentives
 - 15.2 Taxation and Duty
 - 15.3 Testing and Certifications
- 16 Funding and Investments by Key Startups
- 17 Competitive Landscape
 - 17.1 Supplier Selection
 - 17.2 Key Global Players
 - 17.3 Key Regional Players
 - 17.4 Key Player Strategies
 - 17.5 Company Profile
 - 17.5.1 Sun Mobility Private Limited
 - 17.5.1.1 Company Overview
 - 17.5.1.2 Product Portfolio
 - 17.5.1.3 Demographic Reach and Achievements
 - 17.5.1.4 Certifications
 - 17.5.2 Upgrid Solutions Private Limited

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- 17.5.2.1 Company Overview
- 17.5.2.2 Product Portfolio
- 17.5.2.3 Demographic Reach and Achievements
- 17.5.2.4 Certifications
- 17.5.3 Numocity
- 17.5.3.1 Company Overview
- 17.5.3.2 Product Portfolio
- 17.5.3.3 Demographic Reach and Achievements
- 17.5.3.4 Certifications
- 17.5.4 Bounce Electric 1 Private Limited
- 17.5.4.1 Company Overview
- 17.5.4.2 Product Portfolio
- 17.5.4.3 Demographic Reach and Achievements
- 17.5.4.4 Certifications
- 17.5.5 JSW MG Motor India Pvt. Ltd.
- 17.5.5.1 Company Overview
- 17.5.5.2 Product Portfolio
- 17.5.5.3 Demographic Reach and Achievements
- 17.5.5.4 Certifications
- 17.5.6 Others
- 18 Key Trends and Developments in the Market

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