

Nickel Metal Hydride Battery For Electric Vehicle Application - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 124 pages | Mordor Intelligence

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Report description:

The Nickel Metal Hydride Battery Market For Electric Vehicle Application Industry is expected to grow from USD 4.49 billion in 2025 to USD 9.51 billion by 2030, at a CAGR of 16.21% during the forecast period (2025-2030).

Key Highlights

- Over the medium term, factors such as the increasing demand for electric vehicles and cost-effectiveness are expected to drive the market during the forecast period.
- On the other hand, competition from alternative technologies is expected to hinder market growth during the forecast period.
- However, technological advancements are expected to provide significant opportunities for the market in the coming years.
- Asia-Pacific is estimated to dominate the market due to the increasing adoption rate of electric vehicles across the various countries in the region.

Nickel Metal Hydride Battery Market Trends

Battery Electric Vehicles are Expected to Dominate

- Battery electric vehicles (BEVs) are electric vehicles powered entirely by rechargeable batteries with no internal combustion engine. They rely on electric motors for propulsion and store electricity in high-capacity battery packs.
- NiMH batteries have long been a popular choice for various electric vehicle applications due to their relatively high energy density, longevity, and ability to operate effectively in a range of temperatures. While lithium-ion batteries have dominated the

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market in recent years, NiMH batteries continue to play a significant role, especially in hybrid vehicles and some BEVs.

- The demand for BEVs has surged globally, with sales growing from 1.5 million units in 2019 to 9.5 million units in 2023. This growth is driven by increasing environmental concerns, government regulations aimed at reducing emissions, and advancements in battery technologies.
- Battery-electric cars were the third most popular choice among buyers in 2023. In December, their market share rose to 18.5%, contributing to an overall annual share of 14.6%, which surpassed diesel's steady 13.6%. Petrol vehicles maintained the top spot at 35.3%, while hybrid-electric cars held the second position with a 25.8% market share.
- However, in December 2023, new battery-electric car sales fell for the first time since April 2020, decreasing by 16.9% to 160,700 units. This decline was attributed to a strong performance in December 2022 and a notable drop in Germany, which saw a 47.6% decrease, as it is the largest market for battery-electric cars. Despite this dip, the total sales volume for the year exceeded 1.5 million units, marking a significant 37% increase compared to 2022, with the battery-electric car market share reaching 14.6%.
- Conversely, new EU registrations of hybrid-electric cars saw a 26% surge in December, driven by strong gains in three of the four largest markets: Germany (+38%), France (+32.6%), and Spain (+24.3%). This trend contributed to an overall increase of 29.5% in 2023, resulting in more than 2.7 million hybrid-electric vehicles sold, which accounted for a quarter of the EU market share.
- As the industry evolves, the continued investment in NiMH technology could lead to its resurgence in the BEV market, particularly in specific segments where its unique advantages are most beneficial. Overall, the BEV segment of the NiMH battery market is poised for growth as demand for electric vehicles rises and battery technology continues to advance.

North America is Expected to Dominate

- The North American nickel-metal hydride (NiMH) battery market for electric vehicle (EV) applications is witnessing a transformative phase driven by the increasing adoption of hybrid electric vehicles (HEVs) and the push for greener transportation solutions. NiMH batteries, known for their durability, thermal stability, and cost-effectiveness, are widely utilized in HEVs due to their ability to store energy and efficiently support regenerative braking systems.
- In recent years, the demand for electric vehicles in North America has surged significantly. The growth of electric vehicle sales, which increased from 325,000 units in 2019 to approximately 1.39 million units in 2023 in the United States alone, reflects a strong consumer shift toward more sustainable transportation options. This trend is complemented by government incentives and policies promoting EV adoption and reducing greenhouse gas emissions.
- For instance, in January 2024, the Department of Treasury and the Department of Energy confirmed that the Inflation Reduction Act's 30C for EV charging tax credit will be available to approximately two-thirds of American citizens and will provide up to 30% off the cost of the charger to individuals and businesses in low-income communities and non-urban areas, making it more affordable to install EV charging infrastructure and increasing access to EV charging in underserved communities.
- Major automotive manufacturers, particularly Toyota, have driven the NiMH battery market by integrating them into their hybrid models. Toyota's well-established HEV lineup, which relies heavily on NiMH technology, has contributed significantly to the overall market demand. Additionally, the automotive industry's focus on improving fuel efficiency and reducing dependence on fossil fuels has further solidified the role of NiMH batteries in hybrid applications.
- Despite competition from lithium-ion batteries, which offer higher energy densities and faster charging times, NiMH batteries remain a viable option for many HEVs due to their lower costs and established manufacturing processes. Moreover, ongoing advancements in battery technology are enhancing the performance of NiMH batteries, making them more competitive in the evolving market.
- In conclusion, the North American nickel-metal hydride battery market for electric vehicle applications is positioned for growth, driven by the increasing adoption of hybrid vehicles, technological advancements, and supportive government policies. As the region continues to prioritize sustainable transportation, NiMH batteries will play a crucial role in the transition to cleaner and

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more efficient mobility solutions.

Nickel Metal Hydride Battery Industry Overview

The nickel metal hydride battery market for electric vehicle applications is consolidated. Some of the major players include (not in particular order) Panasonic Holdings Corporation, BYD Company, EV Energy Co. Ltd, FDK Corporation, and Toyota Motor Corp.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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