

Off-Highway Electric Vehicle Market to Skyrocket to \$168.7B by 2031, Driven by Sustainability & Tech Innovations

WILMINGTON, NEW CASTLE, DE, UNITED STATES, February 8, 2025 /EINPresswire.com/ -- According to the report published by Allied Market Research, [the global off-highway electric vehicle market size](#) generated \$15.7 billion in 2021, and is estimated to reach \$168.7 billion by 2031, witnessing a CAGR of 26.7% from 2022 to 2031. The report offers a detailed analysis of changing market trends, top segments, key investment pockets, value chain, regional landscape, and competitive scenario. The report is a helpful source of information for leading market players, new entrants, investors, and stakeholders in devising strategies for the future and taking steps to strengthen their position in the market.



The infographic features a photograph of a yellow off-highway electric vehicle (a wheel loader) parked next to a white charging station. The text on the right side of the infographic reads: "OFF-HIGHWAY ELECTRIC VEHICLE MARKET", "OPPORTUNITIES AND FORECAST, 2021 - 2031", "Off-highway electric vehicle market is expected to reach **\$168.7 BILLION** by 2031", and "Growing at a **CAGR OF 26.7%** (2022-2031)". At the bottom left of the infographic, it says "Report Code: A08770. www.alliedmarketresearch.com".

Off-Highway Electric Vehicle Market Share

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The concept of off-highway electric vehicle is typically attributed to the off-road vehicle that use a propulsion technology which does not produce internal combustion engine exhaust or other carbon emissions when it operates. It is designed to operate on public roads as well as rough terrain. Moreover, off-highway electric vehicles have a wide range of applications in the area of good carriers, agricultural applications, and passenger commute. For instance, in June 2021, Caterpillar announced the launch of the R1700 XE LHD battery electric vehicle at MINExpo, an international trade show sponsored by the National Mining Association. It was capable of carrying 15-tonne payload. Furthermore, it was capable of being fully charged in less than 30 minutes using a single charger or in less than 20 minutes using two chargers.

In recent years, electric driven off-highway electric vehicles are gaining momentum, owing to its fuel-efficient operations along with effective noise reduction level. Use of off-highway electric vehicles are regulated by stringent government rules and regulations for improved safety. Thus, governments across the globe are implementing vehicle emission norms to control greenhouse

emission and maintain environmental balance. Manufacturers need to comply with these regulations to control the emission level. For instance, from April 2020, the Government of India implemented BS6 emission standard to control outflow of air pollutants from vehicles.

In addition, the [off-highway electric vehicle market has witnessed significant growth](#) in recent years, owing to the growth in the mining industry, increasing pollution from the diesel-powered vehicles, and the developments carried out in the automobile industry. Furthermore, the companies operating in the off-highway EV market have adopted collaborations, investments, and product launches to increase their market share and expand their geographical presence. For instance, in March 2021, Hitachi Construction Equipment Co., Ltd. signed a Memorandum of Understanding (MoU) with ABB, a leading global technology company dealing in electrification, robotics and automation. The two companies worked together to apply ABB's electrification, automation and digital solutions to Hitachi mining trucks and excavators. This increased the offerings by Hitachi in the electric construction equipment segment.

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<https://www.alliedmarketresearch.com/purchase-enquiry/A08770>

The report offers a detailed a segmentation of the global off-highway electric vehicle market based on vehicle type, energy storage capacity, battery type, application, and region. The report provides an analysis of each segment and sub-segment with the help of tables and figures. This analysis helps market players, investors and new entrants in determining the sub-segments to be tapped on to achieve growth in the coming years.

Based on vehicle type, the hybrid electric vehicle (HEV) segment held the largest share in 2021, contributing to over three-fifths of the global off-highway electric vehicle market, and is likely to maintain its leadership status during the forecast period. However, the battery electric vehicle (BEV) segment is expected to manifest the highest CAGR of 28.4% from 2022 to 2031.

Based on energy storage capacity, the 50–200 kWh segment held the largest share in 2021, accounting for nearly half of the global off-highway electric vehicle market, and would rule the roost through 2031. However, the >200 kWh segment is estimated to witness the fastest CAGR of 28.5% during the forecast period.

Based on battery type, the Lithium-Ion (Li-Ion) segment was the largest in 2021, grabbing nearly 90% of the global off-highway electric vehicle market, and is likely to maintain its leadership status during the forecast period. The same segment is expected to manifest the highest CAGR of 27.3% from 2022 to 2031. The report also includes the lead-acid segment.

Based on region, the market in Asia-Pacific accounted for more than two-fifths of the global off-highway electric vehicle market in 2021, and is likely to maintain its leadership status during the forecast period. However, the off-highway electric vehicle market in Europe is expected to manifest the highest CAGR of 29.2% from 2022 to 2031. The report also discusses the North

America and LAMEA regions.

The factors such as increase in trend of recreational activities & adventure sports, rise in demand for electric machinery in construction sector, and surge in sales of [electric vehicles supplement the growth of the off-highway electric vehicle](#) market. However, high maintenance cost of off-highway electric vehicles and ban on ATV & UTV driving in wildlife area are the factors expected to hamper the growth of the market. In addition, technology development in off-highway electric vehicle and expansion of dealer network for effective product reach create market opportunities for the key players operating in the off-highway electric vehicle market.

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- Caterpillar Inc. (United States)
- Volvo Construction Equipment AB (Sweden)
- Komatsu Ltd. (Japan)
- Deere & Company (John Deere) (United States)
- Sandvik AB (Sweden)
- Hitachi Construction Machinery Co., Ltd. (Japan)
- Epiroc AB (Sweden)
- Doosan Corporation (South Korea)
- J C Bamford Excavators Ltd. (JCB) (United Kingdom)
- CNH Industrial N.V. (Netherlands)

The report analyzes these key players of the global off-highway electric vehicle market. These players have adopted various strategies such as expansion, new product launches, partnerships, and others to increase their market penetration and strengthen their position in the industry. The report is helpful in determining the business performance, operating segments, product portfolio, and developments by every market player.

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<https://www.alliedmarketresearch.com/bicycle-lights-market-A31859> - Global Opportunity Analysis and Industry Forecast, 2021-2031

<https://www.alliedmarketresearch.com/power-sports-market-A11396> - Global Opportunity Analysis and Industry Forecast, 2023-2032

<https://www.alliedmarketresearch.com/adventure-motorcycle-market-A14786> - Global Opportunity Analysis and Industry Forecast, 2023-2032

<https://www.alliedmarketresearch.com/electric-vehicle-motor-market> - Global Opportunity Analysis and Industry Forecast, 2023-2032

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