

Military Vehicle Electrification Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Technology (Hybrid, Fully Electric), By System (Power Generation, Cooling Systems, Energy Storage, Traction Drive Systems, Power Conversion), By Platform (Combat Vehicles, Support Vehicles, Unmanned Armored Vehicles), By Region, Competition, 2020-2030F

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Report description:

Market Overview

The Global Military Vehicle Electrification Market, valued at USD 18.56 Billion in 2024, is projected to experience a CAGR of 10.26% to reach USD 33.35 Billion by 2030. Military vehicle electrification involves integrating electric and hybrid propulsion systems into military platforms, replacing or supplementing conventional internal combustion engines with electric drivetrains and energy storage systems.

Key Market Drivers

The global military vehicle electrification market is principally propelled by the pursuit of strategic and tactical battlefield advantages and the continuous advancements in battery and drivetrain technologies. The drive for enhanced operational efficiency forms a critical strategic imperative, enabling capabilities such as reduced acoustic and thermal signatures for stealthier operations, silent mobility, and increased onboard power for advanced systems. This necessitates robust supporting infrastructure.

Key Market Challenges

The substantial initial investment required for developing specialized electric drivetrains, high-capacity batteries, and robust charging infrastructure poses a considerable impediment to the expansion of the Global Military Vehicle Electrification Market. The significant capital expenditure involved in research, development, and procurement of these advanced components, coupled with the costs for establishing suitable charging networks, particularly for demanding operational environments, places a heavy burden

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on defense budgets. This financial constraint directly slows the pace of fleet modernization and the integration of new electrified platforms, as resources must be carefully allocated across various critical defense priorities.

Key Market Trends

The shift towards hybrid and fully electric propulsion systems represents a fundamental transformation in military ground vehicle design, driven by the desire for enhanced operational capabilities and efficiency. This transition enables benefits such as reduced acoustic and thermal signatures, providing a tactical advantage for stealthier operations, alongside improved fuel economy and extended periods of silent mobility. Indicative of this industry-wide focus, SAE International announced the formation of its Vehicle Platform Power Management Committee (J3311) in January 2024, tasked with standardizing optimal power generation and consumption for electric and hybrid electric vehicles, which reflects a concerted effort toward system integration.

Key Market Players

- BAE Systems plc
- Oshkosh Corporation
- General Dynamics Corporation
- Rheinmetall AG
- General Motors Holdings LLC
- Textron Systems Corporation (Textron Inc.)
- Arquus (John Cockerill Group)
- Singapore Technologies Engineering Ltd.
- Hyundai Rotem Company (Hyundai Motor Group)
- KNDS N.V.

Report Scope:

In this report, the Global Military Vehicle Electrification Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

-□Military Vehicle Electrification Market, By Technology:

- o Hybrid
- o Fully Electric

-□Military Vehicle Electrification Market, By System:

- o Power Generation
- o Cooling Systems
- o Energy Storage
- o Traction Drive Systems
- o Power Conversion

-□Military Vehicle Electrification Market, By Platform:

- o Combat Vehicles
- o Support Vehicles
- o Unmanned Armored Vehicles

-□Military Vehicle Electrification Market, By Region:

- o North America
 - United States
 - Canada
 - Mexico
- o Europe
 - France
 - United Kingdom
 - Italy
 - Germany
 - Spain

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- o Asia Pacific
 - China
 - India
 - Japan
 - Australia
 - South Korea
- o South America
 - Brazil
 - Argentina
 - Colombia
- o Middle East & Africa
 - South Africa
 - Saudi Arabia
 - UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies presents in the Global Military Vehicle Electrification Market.

Available Customizations:

Global Military Vehicle Electrification Market report 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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