

# Electric Commercial Vehicle Traction Motor Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025-2034

<https://marketpublishers.com/r/EC72D6AB8BE5EN.html>

Date: February 2025

Pages: 175

Price: US\$ 4,365.00 (Single User License)

ID: EC72D6AB8BE5EN

## Abstracts

The Global Electric Commercial Vehicle Traction Motor Market was valued at USD 2 billion in 2024 and is projected to grow at a CAGR of 12.7% from 2025 to 2034. The industry is rapidly evolving, driven by advancements in efficiency, durability, and performance. Emerging motor technologies, including permanent magnet synchronous motors (PMSM), switched reluctance motors (SRM), and lateral flux motors, are enhancing energy output while minimizing waste. Silicon carbide (SiC) inverters with advanced cooling systems are further optimizing energy use, extending driving range, and improving overall performance. Lightweight materials and compact designs are increasing torque density, making motors ideal for heavy-duty commercial vehicles. Meanwhile, developments in fast-charging infrastructure and battery efficiency are improving the practicality of electric trucks and buses for both urban and long-haul applications. The increasing number of charging stations is significantly reducing wait times for fleet operators.

The electric commercial vehicle traction motor market is segmented by motor type, axle architecture, vehicle category, and power rating. PMSM accounted for over 45% of total revenue in 2024 due to its high energy efficiency, compact structure, and superior power output. These motors offer excellent torque density and regenerative braking, making them the preferred choice for electric trucks and buses. On the basis of axle architecture, integrated e-axles led the market with a 54.5% revenue share in 2024. These systems integrate motors, inverters, and transmissions into a single unit, reducing weight, increasing energy efficiency, and optimizing space within electric trucks and vans. Central drive units remain essential for heavy-duty applications where high torque and durability are critical.

By vehicle category, medium and heavy-duty trucks dominated the market in 2024, driven by strict emissions regulations and increasing fleet electrification. These trucks require powerful, high-torque traction motors that maintain efficiency under demanding loads. Advanced thermal management and modular motor designs are further improving reliability and reducing the total cost of ownership. As adoption grows, manufacturers are developing scalable motor platforms for seamless integration across various commercial EV segments.

Based on power rating, the 200-400 kW segment held the largest share in 2024, contributing over 35% of total revenue. Motors in this range are ideal for long-haul electric trucks and buses, supporting sustainable logistics and freight transport. Motors below 100 kW primarily serve compact electric vans and urban delivery vehicles, while 100-200 kW motors are widely used in light and medium-duty trucks. The above 400 kW category is reserved for high-performance applications, including hydrogen fuel cell-powered vehicles and electric mining trucks.

The Asia Pacific region held the largest share of the market in 2024, accounting for over 35% of the global industry. China emerged as the dominant player, projected to reach USD 1.8 billion by 2034, fueled by policy incentives, technological advancements, and its stronghold in battery and rare-earth material production.

## Contents

### CHAPTER 1 METHODOLOGY & SCOPE

- 1.1 Research design
  - 1.1.1 Research approach
  - 1.1.2 Data collection methods
- 1.2 Base estimates & calculations
  - 1.2.1 Base year calculation
  - 1.2.2 Key trends for market estimation
- 1.3 Forecast model
- 1.4 Primary research and validation
  - 1.4.1 Primary sources
  - 1.4.2 Data mining sources
- 1.5 Market scope & definition

### CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Industry synopsis, 2021 - 2034

### CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem analysis
  - 3.1.1 Motor manufacturers
  - 3.1.2 Battery suppliers
  - 3.1.3 OEMs
  - 3.1.4 Power electronics suppliers
  - 3.1.5 Charging infrastructure providers
- 3.2 Supplier landscape
- 3.3 Profit margin analysis
- 3.4 Technology & innovation landscape
- 3.5 Patent analysis
- 3.6 Key news & initiatives
- 3.7 Startup funding analysis
- 3.8 Regulatory landscape
- 3.9 Impact forces
  - 3.9.1 Growth drivers
    - 3.9.1.1 Rising adoption of electric commercial vehicles (ECVS)
    - 3.9.1.2 Stringent emission regulations & sustainability goals

- 3.9.1.3 Advancements in motor efficiency & technology
- 3.9.1.4 Expansion of charging infrastructure & battery advancements
- 3.9.2 Industry pitfalls & challenges
  - 3.9.2.1 High initial cost & limited ROI for fleet operators
  - 3.9.2.2 Supply chain & raw material constraints
- 3.10 Growth potential analysis
- 3.11 Porter's analysis
- 3.12 PESTEL analysis

## **CHAPTER 4 COMPETITIVE LANDSCAPE, 2024**

- 4.1 Introduction
- 4.2 Company market share analysis
- 4.3 Competitive positioning matrix
- 4.4 Strategic outlook matrix

## **CHAPTER 5 MARKET ESTIMATES & FORECAST, BY MOTOR, 2021 - 2034 (\$BN, UNITS)**

- 5.1 Key trends
- 5.2 AC induction motors
- 5.3 Permanent magnet synchronous motors (PMSM)
- 5.4 Switched reluctance motors (SRM)
- 5.5 DC motors

## **CHAPTER 6 MARKET ESTIMATES & FORECAST, BY VEHICLE, 2021 - 2034 (\$BN, UNITS)**

- 6.1 Key trends
- 6.2 Pickups trucks
- 6.3 Medium and heavy-duty trucks
- 6.4 Vans
- 6.5 Buses

## **CHAPTER 7 MARKET ESTIMATES & FORECAST, BY POWER RATING, 2021 - 2034 (\$BN, UNITS)**

- 7.1 Key trends
- 7.2 Less than 100 kW

- 7.3 100-200 kW
- 7.4 200-400 kW
- 7.5 Above 400 kW

## **CHAPTER 8 MARKET ESTIMATES & FORECAST, BY AXLE ARCHITECTURE, 2021 - 2034 (\$BN, UNITS)**

- 8.1 Key trends
- 8.2 Integrated
- 8.3 Central drive unit

## **CHAPTER 9 MARKET ESTIMATES & FORECAST, BY TRANSMISSION, 2021 - 2034 (\$BN, UNITS)**

- 9.1 Key trends
- 9.2 Single-speed drive
- 9.3 Multi-speed drive

## **CHAPTER 10 MARKET ESTIMATES & FORECAST, BY DESIGN, 2021 - 2034 (\$BN, UNITS)**

- 10.1 Key trends
- 10.2 Radial flux
- 10.3 Axial flux

## **CHAPTER 11 MARKET ESTIMATES & FORECAST, BY REGION, 2021 - 2034 (\$BN, UNITS)**

- 11.1 Key trends
- 11.2 North America
  - 11.2.1 U.S.
  - 11.2.2 Canada
- 11.3 Europe
  - 11.3.1 UK
  - 11.3.2 Germany
  - 11.3.3 France
  - 11.3.4 Italy
  - 11.3.5 Spain
  - 11.3.6 Russia

- 11.3.7 Nordics
- 11.4 Asia Pacific
  - 11.4.1 China
  - 11.4.2 India
  - 11.4.3 Japan
  - 11.4.4 Australia
  - 11.4.5 South Korea
  - 11.4.6 Southeast Asia
- 11.5 Latin America
  - 11.5.1 Brazil
  - 11.5.2 Mexico
  - 11.5.3 Argentina
- 11.6 MEA
  - 11.6.1 UAE
  - 11.6.2 South Africa
  - 11.6.3 Saudi Arabia

## **CHAPTER 12 COMPANY PROFILES**

- 12.1 ABB
- 12.2 Allison Transmission
- 12.3 BorgWarner
- 12.4 Bosch
- 12.5 Continental
- 12.6 Dana
- 12.7 Danfoss Editron
- 12.8 General Electric
- 12.9 Hitachi Automotive
- 12.10 Magna
- 12.11 Mitsubishi Electric
- 12.12 Nidec
- 12.13 Siemens
- 12.14 Skoda Transportation
- 12.15 Toshiba
- 12.16 Valeo
- 12.17 Wabtec
- 12.18 Wolong Electric
- 12.19 Yaskawa Electric
- 12.20 ZF

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