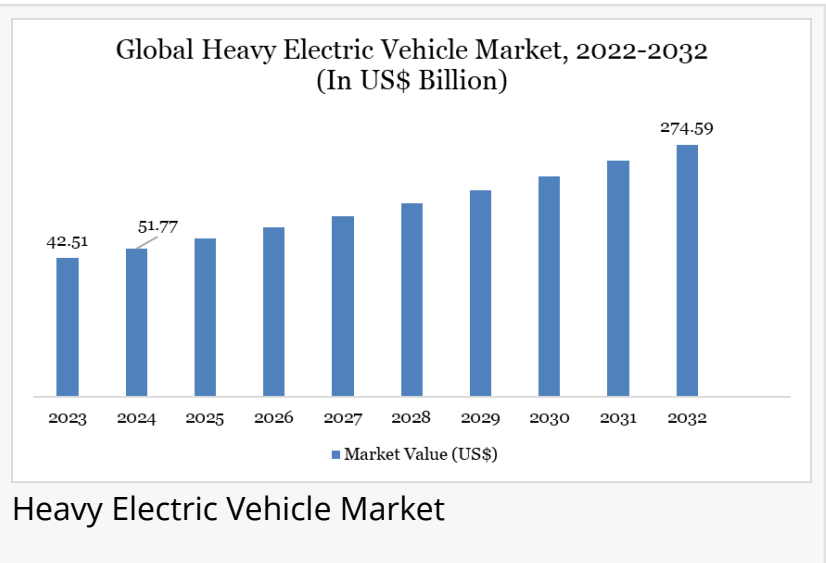


Heavy Electric Vehicle (EV) Market Outlook 2025–2032 | Rapid Growth to \$23.19Bn By 2032

Heavy Electric Vehicle Market to hit US\$ 274.59 Bn by 2032 from US\$ 51.77 Bn in 2024, growing at a CAGR of 23.19%.

YOKOHAMA, TOKYO, JAPAN, September 1, 2025 /EINPresswire.com/ -- Market Overview

The transportation sector is undergoing a once-in-a-century transformation, and at the center of it lies heavy electric vehicles (HEVs). These vehicles—ranging from trucks and buses to heavy-duty vans are no longer niche experiments but critical drivers of the global push toward decarbonization, efficiency, and smart mobility.



The Heavy Electric Vehicle Market is set for strong growth, with rising adoption in the USA and Japan driven by EV infrastructure and clean energy goals”

*DataM Intelligence 4Market
Research LLP*

According to DataM Intelligence, the global heavy electric vehicle market is set to expand rapidly US\$ 274.59 billion by 2032, fueled by policy mandates, technological progress, and increasing corporate commitments to sustainability 2025-2032

Why Heavy EVs Matter?

Unlike passenger cars, heavy-duty vehicles account for a disproportionate share of transport emissions. The International Energy Agency (IEA) notes that while heavy

trucks represent less than 5% of the global vehicle fleet, they contribute nearly 40% of transport-related CO₂ emissions. Shifting this segment to electric power offers outsized benefits both environmentally and commercially.

For fleet operators, HEVs reduce dependency on volatile diesel prices, lower operating costs through fewer moving parts, and align with ESG (Environmental, Social, and Governance) targets that are increasingly influencing investor and consumer decisions.

Market Size and Growth

The global [heavy electric vehicle industry](#), valued at US\$ 51.77 billion in 2024, is projected to surge to US\$

274.59 billion by 2032, advancing at a strong CAGR of 23.19% between 2025 and 2032. Countries including the U.S., China, Germany, and Japan are leading adoption, supported by strong government incentives, emission regulations, and infrastructure investments.

Get a Sample PDF Of This Report (Get Higher Priority for Corporate Email ID):-

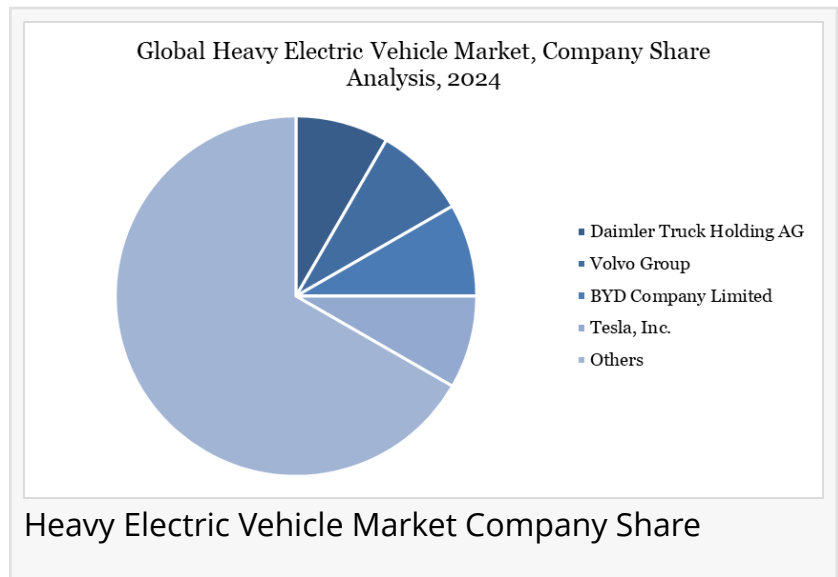
<https://www.datamintelligence.com/download-sample/heavy-electric-vehicle-market>

- In the U.S., the Environmental Protection Agency (EPA) has proposed new standards for greenhouse gas emissions, targeting near-zero-emission heavy-duty fleets by 2045.
- In China, the government has mandated electrification targets for public buses in major cities, driving rapid adoption.
- Europe's Green Deal aims to cut transport emissions by 90% by 2050, with heavy trucks a key focus area.

DataM Intelligence projects that by 2032, HEVs will represent a significant portion of new commercial fleet sales globally, particularly in logistics, urban delivery, and public transit.

Recent Developments:

- In June 2025, India's Ministry of Heavy Industries (MHI) opened the application portal for the Scheme to Promote Manufacturing of Electric Passenger Cars (SPMEPCI). Originally announced in March 2024, and further detailed with guidelines in June 2025, the initiative is designed to accelerate domestic EV production capacity.
- In September 2024, Volvo introduced its next-generation heavy-duty electric truck, offering a range of up to 600 km on a single charge. This advancement represents a major step forward for long-distance, zero-emission transport, reinforcing global efforts in heavy vehicle electrification.



and making sustainable freight operations more feasible across extended routes.

Key Growth Drivers

1. Battery Innovation

Battery technology remains the backbone of heavy EV adoption. Advances in lithium iron phosphate (LFP) and solid-state batteries are extending range beyond 500 miles per charge, making long-haul applications increasingly viable. Falling battery costs down nearly 90% since 2010 are also narrowing the price gap with diesel trucks.

2. Charging Infrastructure

Fast-charging networks and megawatt charging systems (MCS) are game changers for heavy trucks. In the U.S., the Department of Energy (DOE) has funded corridor-based charging projects for freight routes, while Europe's AFIR regulation mandates charging every 60 km along major highways.

3. Fleet Economics

Although upfront costs are higher, HEVs offer total cost of ownership (TCO) savings over their lifecycle. Lower fuel and maintenance costs plus government subsidies and tax credits are tipping the scale in favor of electrification for logistics giants like Amazon, DHL, and FedEx, who are already rolling out heavy EV fleets.

Key Players

1. Daimler Truck Holding AG
2. Volvo Group
3. BYD Company Limited
4. Tesla, Inc.
5. Nikola Corporation
6. Scania AB
7. PACCAR Inc.
8. Tata Motors Limited
9. Ashok Leyland Limited
10. Hyundai Motor Company

Commercial Applications

- **Public Transit:** Cities from Los Angeles to Shenzhen are replacing diesel buses with electric fleets, cutting noise and urban air pollution.
- **Freight & Logistics:** Long-haul electric trucks from Tesla, BYD, Volvo, and Daimler are now on the roads, proving the model is commercially viable.

- Construction & Mining: Companies are testing heavy electric dump trucks and loaders, reducing diesel dependency in off-road industries.

Challenges to Overcome

- Range Anxiety for Long-Haul: While city logistics are well-suited, long-distance freight still faces infrastructure limitations.
- High Upfront Costs: Even with falling battery prices, heavy EVs require significant investment, especially for small operators.
- Grid Readiness: Large-scale fleet electrification will strain local power grids, demanding upgrades and integration with renewable energy sources.

Future Outlook & DataM Recommendations

The heavy electric vehicle market is moving beyond early adoption into a phase of rapid scaling. However, success will require coordinated action across stakeholders. DataM Intelligence highlights three strategic priorities:

Infrastructure First: Governments and private players must accelerate investment in charging corridors, depot charging, and grid integration.

Battery Partnerships: OEMs and suppliers should invest in battery recycling and next-gen chemistries to ensure supply stability.

TCO Transparency: Clear communication of lifetime cost advantages will help overcome fleet operator hesitation.

Market Segmentation

By Vehicle Type: (Electric Construction & Mining Vehicles, Electric Trucks, Electric Buses)

By Propulsion Type: (Plug-in Hybrid Electric Vehicle (PHEV), Battery Electric Vehicle (BEV), Fuel Cell Electric Vehicle (FCEV))

By Battery Type: (Lithium-Ion Battery, Nickel-Metal Hydride (NiMH) Battery, Solid-State Battery, Others)

By Battery Capacity: (Less than 200 kWh, 200-500 kWh, Above 500 kWh)

By Application: (Logistics and Freight Transportation, Public Transport, Construction & Mining, Others)

By Region: (North America, South America, Europe, Asia-Pacific and Middle East and Africa)

Buy Now & Unlock 360° Market Intelligence:- <https://www.datamintelligence.com/buy-now-page?report=heavy-electric-vehicle-market>

Conclusion

Heavy electric vehicles represent more than just a cleaner alternative they are the backbone of future-ready transport systems. With emission regulations tightening, battery costs falling, and infrastructure expanding, the transition is no longer a question of if, but when.

As DataM Intelligence analysis suggests, businesses that proactively embrace HEVs now will not only gain cost advantages but also strengthen their market reputation as sustainable leaders in the mobility revolution.

Related Reports:

[Electric Vehicle Market Size](#)

[Electric Vehicle Charging Station Market](#)

Request 2 Days Free Trials with DataM Subscription Services:

<https://www.datamintelligence.com/reports-subscription>

Power your decisions with real-time competitor tracking, strategic forecasts, and global investment insights all in one place.

1. Competitive Landscape
2. Sustainability Impact Analysis
3. KOL / Stakeholder Insights
4. Unmet Needs & Positioning, Pricing & Market Access Snapshots
5. Market Volatility & Emerging Risks Analysis
6. Quarterly Industry Report Updated
7. Live Market & Pricing Trends
8. Import-Export Data Monitoring

Have a look at our Subscription Dashboard: <https://www.youtube.com/watch?v=x5oEiqEqTWg>

Sai Kiran

DataM Intelligence 4market Research LLP

+1 877-441-4866

sai.k@datamintelligence.com

Visit us on social media:

[LinkedIn](#)

[X](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/845021881>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.