

# US Electric Vehicle Battery Market - Strategic Insights and Forecasts (2026-2031)

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## Abstracts

The US Electric Vehicle Battery market is forecast to grow at a CAGR of 19.3%, reaching USD 37.7 billion in 2031 from USD 15.6 billion in 2026.

The United States electric vehicle (EV) battery market is undergoing a fundamental structural transformation, transitioning from an import-dependent sector to one anchored by large-scale domestic manufacturing capacity. This shift is driven by assertive federal industrial policy, rising EV adoption rates, and a strategic imperative to reduce exposure to geopolitically concentrated global supply chains. Capital commitments from both domestic and international manufacturers are forming a developing 'Battery Belt' across the American South and Midwest, directly linking cell production with major EV assembly operations. The market's trajectory is defined by vertically integrated supply chain development, chemistry diversification, and an expanding in-use EV fleet that continues to generate both OEM and replacement demand.

## Market Drivers

The primary growth catalyst is the federal policy environment, particularly the Inflation Reduction Act's Advanced Manufacturing Production Credit (45X), which provides per-kWh tax credits for domestically produced battery cells and modules. This incentive structure makes US-manufactured batteries cost-competitive, accelerating onshoring decisions by global cell manufacturers. The projected domestic manufacturing capacity pipeline now exceeds 1,100 GWh annually by 2030. Accelerating EV adoption reinforces this demand trajectory, with over 1.5 million EVs sold in 2024 and a cumulative in-use fleet surpassing 5.7 million vehicles. This growing installed base drives both OEM production supply requirements and aftermarket replacement demand.

The Bipartisan Infrastructure Law provides additional support through targeted funding for battery processing, manufacturing, and recycling research and development, lowering barriers to entry for domestic supply chain participants.

## Market Restraints

The most significant constraint is the critical mineral and active material gap. The US supply chain remains heavily reliant on imports for the complex processing of graphite, nickel, and cobalt, with domestic production capacity estimated to meet only approximately 25% of local Cathode Active Material (CAM) and Anode Active Material (AAM) needs by 2030. This dependency exposes manufacturers to commodity price volatility and supply disruption risk, increasing the cost risk profile for capital-intensive factory investments. Solid-state battery technology, while widely anticipated as a next-generation advancement, continues to face scalability and production cost barriers that defer its mass-market viability, leaving established lithium-ion chemistries as the only commercially scalable option in the near term.

## Technology and Segment Insights

Lithium-ion batteries maintain dominant market share due to their proven cost-performance characteristics, mature supply chains, and continuous incremental improvements in energy density and cycle life. Within this category, Lithium Iron Phosphate (LFP) chemistry is gaining significant traction as it eliminates cobalt and reduces nickel dependency, stabilizing input costs and broadening affordability for mass-market applications. High-nickel NMC chemistries retain relevance for premium and long-range vehicle segments. The commercial vehicle segment is a high-value growth vector, driven by total cost of ownership economics and corporate fleet decarbonization commitments rather than retail price sensitivity. Medium- and heavy-duty applications demand large-format, modular battery packs with long cycle life, fast-charge capability, and robust thermal management systems, creating a distinct and specialized product category separate from passenger car solutions. By cell form, cylindrical and prismatic cell formats are both seeing investment, with OEM-specific requirements shaping supplier decisions on format adoption.

## Competitive and Strategic Outlook

The US competitive landscape is defined by international joint ventures, capacity aggregation strategies, and proximity-based manufacturing positioning tied to IRA compliance requirements. LG Energy Solution has established a multi-plant US footprint

through joint ventures with major automakers, using colocation adjacent to OEM assembly facilities to minimize logistics costs and secure long-term supply contracts. SK On is pursuing a high-volume, multi-customer supply model anchored in Georgia, targeting supply reliability and economies of scale across several large automakers. In September 2025, the US Department of Energy advanced negotiations for a minority equity stake in the Thacker Pass lithium project in Nevada, targeting domestic production capacity sufficient to supply batteries for up to 800,000 EVs annually. CATL's April 2025 introduction of sodium-ion and dual-chemistry battery technologies signals an accelerating global shift toward lithium-independent chemistries that will progressively influence US market supply chains through global OEM adoption. Other key participants include Panasonic Corporation, A123 Systems, Nikola Corporation, and Microvast Holdings.

### Key Takeaways

The US EV battery market is entering a period of accelerated capacity growth supported by robust federal incentives, rising EV sales volumes, and strategic foreign investment. Sustained progress in raw material localization, chemistry diversification, and recycling infrastructure will be essential to realizing the market's full potential and reducing structural supply chain vulnerabilities over the forecast period.

### Key Benefits of this Report

**Insightful Analysis:** Gain detailed market insights across regions, customer segments, policies, socio-economic factors, consumer preferences, and industry verticals.

**Competitive Landscape:** Understand strategic moves by key players to identify optimal market entry approaches.

**Market Drivers and Future Trends:** Assess major growth forces and emerging developments shaping the market.

**Actionable Recommendations:** Support strategic decisions to unlock new revenue streams.

**Caters to a Wide Audience:** Suitable for startups, research institutions, consultants, SMEs, and large enterprises.

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Industry and market insights, opportunity assessment, product demand forecasting, market entry strategy, geographical expansion, capital investment decisions, regulatory analysis, new product development, and competitive intelligence.

Report Coverage

Historical data from 2021 to 2025 and forecast data from 2026 to 2031

Growth opportunities, challenges, supply chain outlook, regulatory framework, and trend analysis

Competitive positioning, strategies, and market share evaluation

Revenue growth and forecast assessment across segments and regions

Company profiling including strategies, products, financials, and key developments

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