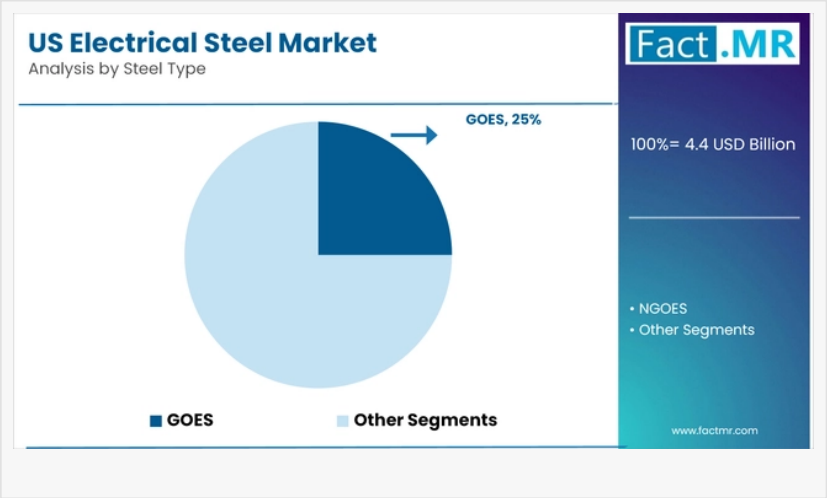
U.S. Electrical Steel Market is Forecasted to Reach USD 8.7 Billion by 2035 | Fact.MR Report

Analysis of U.S. Electrical Steel Market Covering 30+ Countries Including Analysis of US, Canada, UK, Germany, France, Nordics, GCC countries



ROCKVILLE, MD, UNITED STATES, July 14, 2025 /EINPresswire.com/ -- The U.S. Electrical Steel Market, valued at USD 4.4 billion in 2025, is projected to nearly double to USD 8.7 billion by 2035, achieving a robust CAGR of 7.1%. Driven by surging demand from electric vehicles (EVs), renewable energy, and power infrastructure, this market is pivotal in supporting the transition to a sustainable and electrified future. This press release explores key growth drivers, projections, and opportunities for stakeholders in this critical sector.

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Why Is the Market Growing?

The U.S. Electrical Steel Market is thriving due to the rapid expansion of the EV sector, with sales reaching 1.2 million units in 2024, a 40% increase from the previous year. Non-grain-oriented electrical steel (NGOES), holding a 71.3% market share in 2024, is critical for EV motors due to its high magnetic permeability and low core loss, enhancing efficiency. The renewable energy sector, with 30% of U.S. electricity from wind and solar in 2024, drives demand for grain-oriented electrical steel (GOES) in transformers, which minimizes energy losses by 20%.

Government incentives, like the USD 550 billion clean energy package from 2021, bolster infrastructure modernization, including smart grids and power distribution systems. Challenges such as raw material price volatility, with silicon prices up 8% in 2024, are mitigated through innovations in eco-friendly production and recycling, ensuring market resilience.

What Are the Key Market Projections?

The market is expected to grow from USD 4.4 billion in 2025 to USD 8.7 billion by 2035, with a 7.1% CAGR, creating a USD 4.3 billion opportunity. The automotive sector, particularly EVs, holds a 40% share, growing at an 8% CAGR, driven by rising production and consumer demand. The power generation segment, accounting for 40% of the market in 2023, is projected to expand due to renewable energy projects and grid upgrades. The historical CAGR from 2019 to 2023 was 5.4%, indicating an accelerating growth trajectory. Short-term growth (2025–2028) will focus on EV motor applications, while long-term trends (2032–2035) emphasize smart grid integration and high-efficiency transformers, supported by advancements in amorphous and nanocrystalline alloys.

How Can Stakeholders Leverage Opportunities?

Stakeholders in automotive, energy, and manufacturing sectors can capitalize on the market's growth by investing in advanced electrical steel grades. Manufacturers can develop high-performance NGOES, like ArcelorMittal's 2025 Alabama mill expansion, to meet EV motor demand. Partnerships with automakers, such as General Motors' 2024 collaboration with POSCO, enhance production scalability. Targeting renewable energy projects, projected to receive USD 24 billion in investments by 2035, offers significant potential for GOES in transformers.

Recycling initiatives, recovering 90% of steel scrap, address raw material constraints. Compliance with energy efficiency standards, like those from the DOE, ensures market competitiveness, while innovations in coating technologies, such as organic coatings growing at a 3.94% CAGR, enhance product performance.

What Does the Report Cover?

Fact.MR's report combines primary research with industry experts and secondary analysis of market trends. It covers market segments by type (grain-oriented, non-grain-oriented), application (transformers, motors, inductors, others), end-use industry (automotive, energy, manufacturing, household appliances), and thickness (0.35 mm, 0.50 mm, 0.65 mm). The report highlights trends like the adoption of amorphous alloys, EV-driven demand, and smart grid integration, providing actionable insights for stakeholders to navigate market opportunities.

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Who Are the Market Leaders?

Key players include ArcelorMittal, Cleveland-Cliffs Inc., POSCO, Nippon Steel Corporation, and Tata Steel. In 2025, ArcelorMittal invested USD 1.2 billion in an Alabama mill to produce NGOES for EVs and renewable energy. Cleveland-Cliffs expanded its Ohio facility in 2024, increasing

capacity by 15%. These companies, holding over 50% of the market share, drive innovation through R&D, acquisitions, and partnerships with EV and energy firms, meeting rising demand.

What Are the Latest Market Developments?

In 2024, EV sales surged by 40%, boosting NGOES demand for motors. The renewable energy sector saw a 12% increase in transformer installations, driven by wind and solar projects. ArcelorMittal's Alabama mill expansion, announced in February 2025, targets EV and renewable energy applications. Innovations in amorphous alloys, reducing core losses by 10%, gained traction in high-efficiency transformers.

The DOE's USD 155 million investment in energy infrastructure, announced in September 2024, supported grid modernization, further driving demand. Regulatory advancements, like stricter EPA efficiency standards, accelerated the adoption of high-performance electrical steel.

What Challenges and Solutions Exist?

Raw material price fluctuations, with silicon costs up 8% in 2024, and supply chain disruptions, impacting 70% of manufacturers during COVID-19, pose challenges. Environmental concerns, with steel production emitting 1.83 tons of CO2 per ton, require sustainable practices. Solutions include adopting electric arc furnaces, reducing emissions by 30%, and recycling programs recovering 90% of steel scrap. Innovations in low-loss alloys, like amorphous steel, improve efficiency by 10%. Partnerships with renewable energy firms and compliance with DOE and EPA standards ensure market resilience and sustainability.

Conclusion:

The U.S. Electrical Steel Market is poised to reach USD 8.7 billion by 2035, driven by a 7.1% CAGR. With applications in EVs, renewable energy, and power infrastructure, and supported by innovations in high-performance alloys and sustainable practices, the market offers transformative opportunities. Stakeholders can leverage Fact.MR's insights to target high-growth sectors like EVs, invest in eco-friendly production, and address supply challenges to thrive in this critical energy sector.

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