

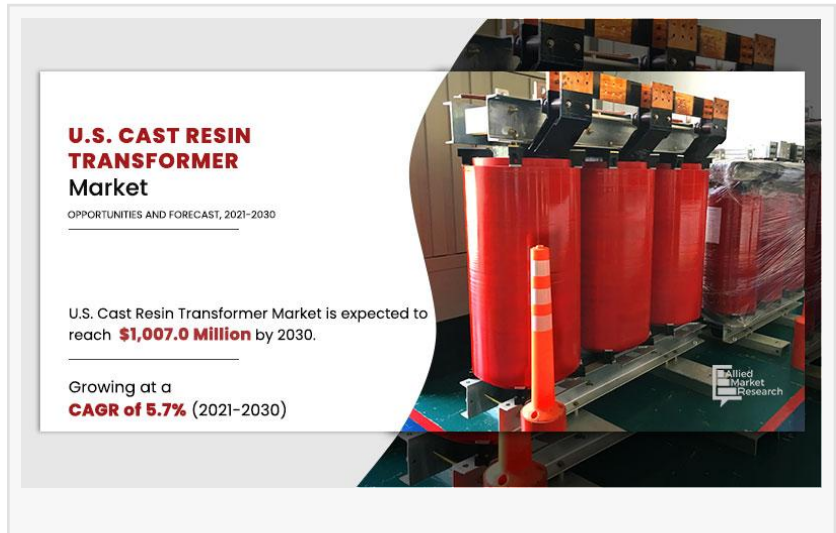
U.S. Cast Resin Transformer Market to Cross \$1 Billion by 2030 Driven by Industrial Demand

□ *Growth in Smart Grid, Industrialization Powers U.S. Cast Resin Transformer Market at 5.7% CAGR*

WILMINGTON, DE, UNITED STATES, July 8, 2025 /EINPresswire.com/ --

□ Market Overview

According to Allied Market Research, the [U.S. cast resin transformer market](#) size was valued at \$574.2 million in 2020 and is expected to reach \$1,007.0 million by 2030, registering a CAGR of 5.7% from 2021 to 2030.



Cast resin transformers are dry-type magnetic transformers where the high-voltage (HV) and low-voltage (LV) windings are vacuum-impregnated and encapsulated in epoxy resin. These air-cooled systems eliminate the need for oil, offering enhanced safety, minimal maintenance, and eco-friendly operation—ideal for indoor and urban applications where fire safety and compactness are essential.



The U.S. cast resin transformer market will reach \$1B by 2030, fueled by rising demand from industrial, commercial, and renewable sectors."

Allied Market Research

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□ Key Takeaways

The U.S. cast resin transformer market is projected to cross \$1 billion by 2030, growing at 5.7% CAGR.

Converter transformers and forced air-cooling systems will continue to dominate due to

industrial and high-load application needs.

The commercial sector is the fastest-growing application due to smart city development and real estate expansion.

Industrial usage—especially in energy, chemicals, and marine—is expected to anchor long-term growth.

Rising focus on safety, eco-friendliness, and fire resistance makes cast resin transformers ideal for the future of electrical infrastructure.

□ Key Market Drivers

□□ Infrastructure Expansion & Electrification

Growth in urban development, commercial buildings, hospitals, and industrial automation has led to a surge in demand for compact, [fire-resistant transformers](#).

Indoor installations, such as data centers, public buildings, and hospitals, prefer cast resin transformers due to low fire hazard and low maintenance.

Rapid renewable energy deployment, such as wind and solar farms, also favors the dry-type setup due to safety and moisture resistance.

□ Eco-Friendly and Safe Operation

The U.S. cast resin transformer market benefits from its pollution-free and fire-retardant design. Unlike oil-filled transformers, cast resin types:

Use no hydrocarbons

Are self-extinguishing

Require minimal civil work and fire protection systems

This makes them especially viable for substations in densely populated urban zones or underground electrical networks.

□□ Maintenance-Free Reliability

Cast resin transformers offer superior overload resistance, high short-circuit withstand strength, and excellent thermal endurance, reducing downtime and operational costs across industrial and utility installations.

□ Segment Analysis

□□ By Type:

Converter Transformers accounted for 59.9% of the market in 2020. Used extensively in:

Excitation systems

DC/AC drives

Urban transit (tram, metro, trolley)

Oil & gas drilling equipment

The rising demand for semiconductor converters and smart traction systems supports continued growth of this segment.

□□ By Cooling Type:

Forced Air-Cooling held the largest revenue share (~63.9% in 2020).

Ideal for quick heat dissipation in high-load industrial applications.

Expected to maintain dominance due to rising transformer operating temperatures and system efficiency needs.

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□ By Phase:

Single-phase transformers represented 90.5% of the market in 2020.

Commonly installed in residential and low-voltage commercial sectors, including schools, offices, and retail facilities.

Projected to grow at 5.6% CAGR, driven by increasing electricity demand in public infrastructure and small businesses.

□ By Voltage:

Low Voltage segment leads the market in revenue.

Used in building management systems, automotive plants, healthcare centers, and power generation stations.

The ongoing rise in smart buildings and [distributed energy systems](#) continues to fuel demand.

□ By End Use:

Industrial was the largest end-user segment in 2020, holding 57.9% market share.

Cast resin transformers are crucial in sectors like:

Oil & gas

Chemical processing

Renewables

Marine

The robust construction and minimal maintenance profile suit harsh and critical operations.

Commercial is the fastest-growing end-user segment, expected to grow at 6.0% CAGR through 2030.

Boosted by rapid development of commercial buildings, data centers, retail chains, and EV charging stations.

□ Competitive Landscape

Key players driving innovation and growth in the U.S. cast resin transformer market include:

Eaton Corporation Plc

Fuji Electric Co. Ltd.

General Electric

Hammond Power Solutions Inc.

Hitachi-ABB Ltd.

Schneider Electric SE

Siemens AG

Hanley Energy LLC

Olsun Electrics Corporation

WEG Group

Other market contributors include MGM Transformer Company, Alfa Transformer, Niagara Transformer Corporation, and Acutran. These companies are investing in modular transformers, smart-grid compatible designs, and green energy solutions to gain competitive edge.

□ COVID-19 Impact

The COVID-19 pandemic in 2020 led to a temporary slowdown in the U.S. cast resin transformer market. Key factors:

Project delays and cancellations across construction, manufacturing, oil & gas, and utilities.

Decline in transformer demand and sales, as capex budgets were frozen.

However, with the gradual lifting of lockdowns and government stimulus for infrastructure recovery, the market is poised to rebound. As economic activity picks up and electrification accelerates, demand for safe, efficient transformers is expected to rise steadily.

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□ Conclusion

The U.S. cast resin transformer market growth is fueled by rising electricity demand, expanding infrastructure, and the need for safe, low-maintenance, and eco-friendly power distribution solutions. Cast resin transformers—thanks to their fire resistance, compact design, and durability—have become the preferred choice across industrial, commercial, and residential sectors. As the nation accelerates toward smart grid modernization, renewable energy adoption, and urban infrastructure upgrades, the role of cast resin transformers will only grow more vital. Backed by strong regulatory support and increasing private investment, the market offers abundant opportunities for innovation, efficiency, and sustainable development.

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