

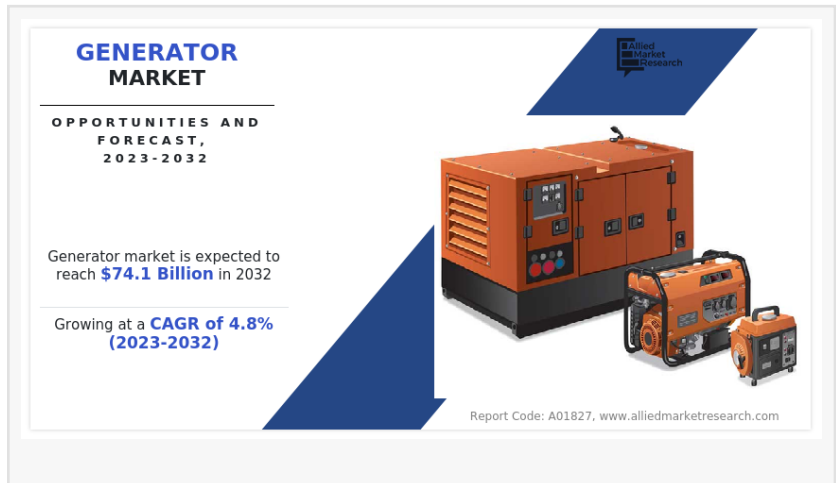
Generator Market Set for Steady 4.8% CAGR Growth Through 2032

Generator Market to Reach \$74.1 Billion by 2032 Amid Rising Backup Power Demand

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According to a report published by Allied Market Research, the [generator market](#) size was valued at \$45.9 billion in 2022 and is projected to reach \$74.1

billion by 2032, growing at a CAGR of 4.8% from 2023 to 2032. The growth of the generator market is being driven by increasing demand for backup power, industrial expansion, and the rising importance of energy security in both developed and emerging economies.



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Global generator market to grow from \$45.9B in 2022 to \$74.1B by 2032, driven by rising power outages, industrial expansion, and backup power demand.”

Allied Market Research

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The market is witnessing strong growth due to increasing power outages, rapid industrial development, and expanding infrastructure projects across emerging economies. Generators continue to be essential for ensuring uninterrupted electricity supply in residential, commercial, and industrial settings, especially in regions

with unstable grid systems.

Rising demand for standby power, the growing adoption of diesel and [gas generators](#), and increased deployment of portable units for construction, mining, and outdoor activities are accelerating market growth. Additionally, the integration of smart monitoring systems, hybrid generator technologies, and eco-friendly fuel options is reshaping the global landscape.

The Role of Generators in Ensuring Power Reliability

Generators play a crucial role in maintaining continuous power supply during outages, ensuring the smooth operation of critical applications across residential, commercial, and industrial settings. Many modern generators start automatically during blackouts, minimizing downtime and operational losses. Their adaptability across diverse applications—ranging from small residential units to large-scale industrial powerhouses—makes them indispensable in today's power ecosystem.

Generators are also vital in remote and off-grid areas, where access to centralized grid infrastructure is not practical. In these regions, generators provide a dependable energy source for homes, businesses, and industries.

Challenges in the Generator Market

Despite their importance, generators come with certain challenges. Most units require fossil fuels such as diesel, gasoline, or natural gas, which contribute to ongoing expenses and carbon emissions. In residential areas, noise and exhaust emissions can be a concern. Regular maintenance is also necessary to ensure generators function reliably when needed. Furthermore, high-quality generator systems can be costly, with installation adding to overall expenses. Portable generators, while convenient, often face limitations due to frequent refueling needs and shorter operational times.

Rising Demand Across Sectors

The demand for generators is increasing across the residential, commercial, and industrial sectors, as power reliability becomes more critical in an increasingly digital and energy-dependent world. In renewable energy systems, generators act as backup power sources when solar or wind generation is low, enhancing energy resilience. Additionally, generators are being deployed to expand electricity access in isolated regions, creating significant opportunities for growth.

Generator Market Segmentation

The global generator market is segmented by type, voltage rating, application, end-use industry, and region.

By Type: Diesel, gas, propane, dual fuel, and hybrid generators. The diesel generator segment is expected to witness the fastest growth, with a projected CAGR of 5.2%.

By Voltage Rating: Below 100 kVA, 100 kVA to 350 kVA, 350 kVA to 1000 kVA, and above 1000 kVA. The 350 kVA to 1000 kVA segment dominated the market in 2022 and is expected to grow at the highest rate in the forecast period.

By Application: Backup power, continuous power, and peak shaving power. The continuous power segment is projected to remain dominant throughout the forecast period.

By End-Use Industry: Residential, commercial, and industrial. The industrial segment accounted for the largest share in 2022 and is expected to maintain its dominance with a CAGR of 5.0%.

By Region: North America, Europe, Asia-Pacific, and LAMEA (Latin America, Middle East, and Africa). Asia-Pacific led the global generator market in 2022 and is projected to maintain its leadership due to rising industrialization and urbanization in countries such as China, India, and Japan.

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International Standards for Generators

The generator industry is governed by international standards to ensure performance, safety, and reliability. Key standards include:

IEC 60034 Series: Covers rotating electrical machines, including generators, with requirements for electrical, mechanical, and thermal characteristics.

ISO 8528 Series: Addresses reciprocating internal combustion engine generator sets, with multiple parts specifying performance and testing.

ISO 8528-1: General requirements for generator sets.

ISO 8528-2: Specific requirements for diesel and gas-driven sets.

ISO 8528-3 to 8528-10: Cover steam turbines, [gas turbines](#), variable speed systems, asynchronous alternators, and synchronous alternators.

These standards help manufacturers and users maintain global benchmarks for efficiency and reliability.

Competitive Landscape

Major players in the generator market include:

Caterpillar

General Electric

Kirloskar Oil Engines Ltd.

Generac Holdings Inc.

Kohler Co.

Aksa Power Generation

Su-kam

Cummins Inc.

ABB Ltd.

Mitsubishi Electric

These companies are pursuing strategies such as product innovation, strategic collaborations, and regional expansion to strengthen their market share.

Market Drivers, Restraints, and Opportunities

Drivers: Rising demand for uninterrupted power supply, industrial growth, and increasing reliance on renewable backup systems.

Restraints: Emissions, noise, high installation costs, and reliance on fossil fuels.

Opportunities: Expansion into off-grid electrification, hybrid generator technologies, and integration with smart energy systems.

Regional Outlook

The Asia-Pacific region dominated the generator market in 2022, supported by rapid industrialization, infrastructure growth, and population expansion. North America and Europe are also seeing strong adoption of backup power systems, particularly in data centers, healthcare facilities, and commercial buildings. Meanwhile, demand in LAMEA is growing due to infrastructure development and the need for reliable electricity in emerging economies.

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Conclusion

The global generator market is set for steady growth, reaching \$74.1 billion by 2032. With rising

demand for power reliability, industrial growth, and the expansion of off-grid electrification, generators remain indispensable. Though challenges such as emissions and maintenance exist, ongoing innovations in cleaner fuels, hybrid systems, and compliance with international standards will shape the future of the market. As Asia-Pacific leads the growth, global manufacturers are well-positioned to capitalize on increasing opportunities in this essential energy sector.

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