

Power Generation Market Sector Outlook 2025-2032 | Rising to \$2.30 Billion with Green Energy Focus

The Power Generation Market is evolving rapidly, driven by clean energy demand, technology innovation, and global energy transition.

AUSTIN, TX, UNITED STATES, July 16, 2025 /EINPresswire.com/ -- Global Power Generation Market Set to Expand as Demand for Clean Energy and Technological Innovation Accelerate



Market Overview

In 2024, the <u>Power Generation Market Size</u> was valued at approximately US\$ 1.67 Billion and is anticipated to rise to around US\$ 2.30 Billion by 2032, reflecting a steady CAGR of 4.1% forecast throughout 2025-2032.

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In the U.S., growing investments in Renewable infrastructure and Energy Storage are key drivers reshaping the Power Generation Market landscape," said an industry analyst." DataM Intelligence 4Market

Research LLP

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Latest Developments:

In April 2025, JSW Energy began constructing a 1,600 MW ultra-supercritical thermal power plant in Salboni, West Bengal, with a \$1.92 billion investment, aiming to boost energy infrastructure over the next 42-48 months.

In June 2024, Wärtsilä unveiled the first large-scale engine

power plant fully prepared for 100% hydrogen use, enabling zero-carbon power generation starting in 2026.

In 2024, over 80% of the global increase in electricity came from clean energy, led by solar PV with 480 TWh, driven by cost declines, policy support, and investor interest.

U.S. utility-scale solar is expected to grow by 34% in 2025 and 18% in 2026, supported by federal incentives and rising corporate demand, with battery storage integration boosting adoption.

Despite the clean energy shift, coal remained dominant in 2022, generating 10,317.2 TWh globally and accounting for 35.37% of total electricity production.

Market Drivers / Opportunities

Shift to Renewable Energy: Countries across the globe are investing heavily in solar, wind, hydro, and biomass to reduce carbon footprints and achieve sustainability targets.



Technological Advancements: Smart grids, digital monitoring, AI-based energy forecasting, and battery energy storage systems are revolutionizing operational efficiency.

Government Support and Policy Incentives: Tax credits, feed-in tariffs, and renewable portfolio standards (RPS) are fostering strong growth in green energy production.

Electrification of Sectors: The growing adoption of electric vehicles (EVs), smart homes, and industrial automation is driving the demand for consistent and clean electricity supply.

Market Geographical Share

Asia-Pacific dominates the global power generation market, driven by significant infrastructure growth and increasing energy demand in countries like China, India, and Japan. North America, particularly the United States, remains a major player with a strong focus on renewable expansion and grid modernization. Europe is making rapid strides in offshore wind and

hydrogen-based power generation, aligned with its Green Deal ambitions.

Key Players

Prominent companies operating in the global power generation market include:

State Grid Corporation of China Engie SA Electricite de France S.A. Iberdrola, S.A. National Thermal Power Corp. Ltd. NTPC Ltd ExxonMobil Chevron Corporation ABB Ltd, Inc. AES Corporation Huaneng Power International, Inc

Market Segmentation:

By Source: Non-Renewable, Renewable

By Grid: Off-Grid, On-Grid

By End-User: Industrial, Commercial, Residential, Transportation

By Region: North America, Latin America, Europe, Asia Pacific, Middle East, and Africa

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Recent Developments

United States

May 2025: The U.S. Department of Energy (DOE) approved funding for a next-generation geothermal demonstration project in Nevada, aiming to diversify clean energy sources.

October 2024: Texas-based utility launched one of the largest battery energy storage systems (BESS) to support intermittent solar and wind power on the grid.

Japan

March 2025: Japan's Ministry of Economy, Trade and Industry (METI) partnered with private firms to develop floating offshore wind farms to meet 2050 carbon neutrality targets.

August 2024: Mitsubishi Power commissioned an ammonia co-firing trial at a thermal plant to explore low-carbon fuel alternatives in existing infrastructure.

Conclusion

The global Power Generation Market is on a transformative path, powered by innovation, decarbonization mandates, and a growing global demand for sustainable electricity. With strong support from governments and private sectors, the shift toward a resilient, low-carbon energy system is accelerating. Stakeholders investing in clean technologies, grid modernization, and international partnerships will be best positioned to lead the next era of power generation.

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