

Power Plant Boiler Market Size to worth USD 36.13 Billion in 2032, Driven by Rising Electricity Demand

The Global Power Plant Boiler Market is estimated to be valued at USD 24.51 Bn in 2025 and exhibiting a (CAGR) of 5.7% from 2025 to 2032.

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EINPresswire.com/ -- The Global [Power](#)

[Plant Boiler Market](#) is estimated to be valued at USD 24.51 Bn in 2025 and is

expected to reach USD 36.13 Bn by 2032, exhibiting a compound annual growth rate (CAGR) of 5.7% from 2025

to 2032. The market trend reflects a strong movement toward advanced boiler technologies designed to boost thermal efficiency and lower emissions, supporting global sustainability targets. There is also increasing focus on integrating renewable energy sources with conventional power plant boilers, creating hybrid systems that enhance operational flexibility and efficiency.

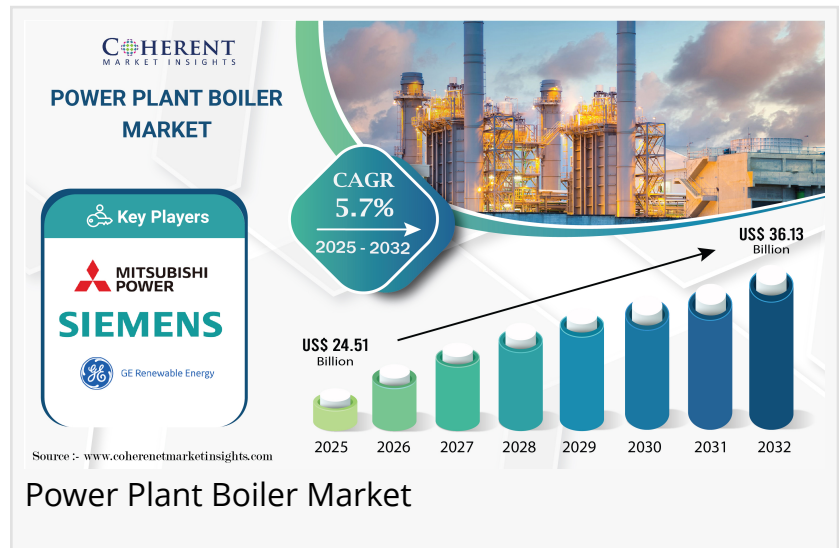
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Global Power Plant Boiler Market Key Takeaways

According to Coherent Market Insights (CMI), the global power plant boiler market size is projected to expand from USD 24.51 Bn in 2025 to USD 36.13 Bn by 2032, exhibiting a CAGR of 5.7%.

Based on process, pulverized fuel combustion segment is slated to account for 45.7% of the global power plant boiler market share in 2025.

In terms of technology, subcritical segment is expected to hold a prominent market share of 31.6% in 2025.



Asia Pacific is set to dominate the global power plant boiler market in 2025 with a 41.8% share.

North America is anticipated to account for 27.5% of the global power plant boiler industry share in 2025.

Increasing Electricity Demand Spurring Power Plant Boiler Market Growth

Coherent Market Insights' latest power plant boiler market analysis highlights major factors driving the industry's growth. One such prominent growth driver is the growing demand for electricity.

Electricity consumption is rising sharply due to industrialization and rapid urbanization. For instance, as per the International Energy Agency (IEA), global electricity demand is estimated to increase by an average annual 3.3% in 2025 and 3.7% through 2026.

Increasing electricity demand necessitates the expansion and modernization of power plant infrastructure. This is expected to boost growth of the power plant boiler market during the forecast period.

High Costs and Shift Towards Renewable Energy Sources Limiting Market Growth

The global power plant boiler market outlook remains positive. However, high initial capital costs and shift towards renewable energy sources might limit market growth during the forecast period.

There is a global transition toward renewable energy. Governments worldwide are prioritizing solar, wind, hydro, and nuclear to reduce carbon emissions and meet sustainability targets. This reduces new investments in thermal power plants, thereby lowering overall power plant boiler market demand.

In addition, power plant boilers, especially supercritical and ultra-supercritical types, require heavy upfront investment. This limits installation in small and medium power projects, thereby slowing down power plant boiler market growth.

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Shift Toward Clean & Efficient Energy Technologies Creating Growth Avenues

There is a strong push for supercritical, ultra-supercritical, and advanced circulating fluidized bed (CFB) boilers due to their higher efficiency as well as lower emissions. Rising adoption of these clean & efficient energy technologies is expected to create lucrative growth prospects for power

plant boiler manufacturers during the assessment period.

Moreover, several developing economies are still investing in coal- and gas-based plants due to cost and grid stability needs. This increasing investment in thermal power generation across these nations is likely to boost sales of power plant boilers during the forthcoming period.

Emerging Power Plant Boiler Market Trends

Rising adoption of biomass co-firing and hybrid fuel systems to reduce emissions is emerging as a key growth-shaping trend in the power-plant boiler market. Growing interest in bio-coal, biomass co-firing, and waste-to-energy systems is driving demand for more flexible, multi-fuel and advanced boiler technologies.

Increasing investment in replacement of aging boiler infrastructure is expected to uplift power plant boiler demand during the forecast period. Many nations, especially in the U.S., Europe, and parts of Asia, are investing in upgrading or replacing older boilers to improve efficiency, comply with emission standards, and ensure reliability. Mitsubishi Power, for instance, received a contract on 5-November-2025 to upgrade existing boiler equipment at the Ô Môn 1 Thermal Power Plant in Cần-Thơ, Vietnam.

Technological advancements in boiler systems will likely support market expansion during the forthcoming period. Innovations such as digital monitoring, automation, AI-enabled predictive maintenance, and advanced materials are boosting the reliability as well as efficiency of power plant boilers.

Implementation of stringent emission regulations is slated to fuel demand for power plant boilers. Governments and environmental bodies are mandating low-emission technologies. This is driving adoption of modern boilers equipped with pollution control systems.

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Competitor Insights

Key companies in the power plant boiler market report include:

- Siemens AG
- General Electric Company
- Babcock & Wilcox Enterprises, Inc.
- Mitsubishi Hitachi Power Systems
- Alstom SA
- Doosan Heavy Industries & Construction
- Foster Wheeler AG

- Thermax Limited
- Hitachi, Ltd.
- Burns & McDonnell
- Veolia Environnement S.A.
- Babcock International Group
- SPX Corporation
- ANDRITZ AG
- Hurst Boiler & Welding Company, Inc.

Market Segmentation

- By Process: Pulverized fuel combustion, Fluidized bed combustion, and Others
- By Technology: Subcritical, Supercritical, and Ultra-critical
- By Fuel: Petroleum, Nuclear, Natural gas, Coal, and Renewables

Key Developments

In September 2025, ANDRITZ was selected to supply a new recovery boiler for Century Pulp & Paper Ltd.'s mill in Lalkuan, Uttarakhand, India. The new boiler will enhance the mill's energy efficiency as well as green energy production. It is scheduled to start operation in early 2027.

In June 2025, Doosan Enerbility won a contract worth KRW 900 billion to build a gas-fired combined-cycle power plant in Vietnam. The plant, named O Mon 4 Power Plant, will have a capacity of 1,155 MW and is expected to be completed by 2028.

In March 2025, Siemens Energy won a \$1.6 billion contract to supply technology for two new gas-fired power plants in Saudi Arabia. The company will provide turbines, generators, and other key equipment, along with long-term maintenance support.

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Raj Shah

Coherent Market Insights Pvt. Ltd.

+1 2524771362

[email us here](#)

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