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Nuclear Energy Equipment Market Forecasts to 2034– Global Analysis By Equipment Type (Reactor Equipment, Auxiliary Equipment, Instrumentation & Control Systems, Safety Equipment and Waste Management Equipment), Reactor Type, Installation Type, Application, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global Nuclear Energy Equipment Market is accounted for $37.44 billion in 2026 and is expected to reach $53.66 billion by 2034 growing at a CAGR of 4.6% during the forecast period. Nuclear Energy Equipment refers to the specialized systems, components, and machinery used in the generation, control, and safety management of nuclear power. It includes reactors, steam generators, turbines, control rods, cooling systems, containment structures, and radiation monitoring devices. These technologies enable the efficient conversion of nuclear fission energy into electricity while ensuring strict safety and environmental protection standards. Designed for high durability and precision, such equipment supports stable power output, regulatory compliance, and operational reliability within nuclear power plants across the global energy infrastructure landscape supporting long term sustainability goals.

Market Dynamics:

Driver:

Rising demand for clean energy

The growing global emphasis on decarbonization is significantly driving the nuclear

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energy equipment market. As countries seek reliable low-carbon alternatives to fossil fuels, nuclear power is gaining renewed attention for its high efficiency and minimal greenhouse gas emissions. Increasing energy demand from urbanization and industrial expansion further strengthens this shift. Governments are investing in nuclear infrastructure to ensure energy security while meeting climate targets, thereby accelerating the deployment of advanced nuclear energy equipment worldwide.

Restraint:

High capital cost

The nuclear energy equipment market faces a major restraint in the form of extremely high capital investment requirements. Construction of nuclear reactors, procurement of specialized equipment, and adherence to stringent safety standards demand substantial upfront funding. Long project timelines and complex regulatory approvals further escalate costs. Additionally, maintenance and decommissioning expenses add financial pressure. These factors often discourage private investors and limit adoption, particularly in developing economies with constrained energy budgets and competing infrastructure priorities.

Opportunity:

Advancements in reactor technology

Technological advancements in reactor design present a strong growth opportunity for the nuclear energy equipment market. Innovations such as small modular reactors (SMRs), Generation IV reactors, and advanced passive safety systems are improving efficiency, safety, and scalability. These developments reduce construction time and operational risks while enhancing fuel utilization. As a result, nuclear energy is becoming more flexible and economically viable. Growing R&D investments and supportive government policies are expected to accelerate commercialization of next-generation reactor technologies globally.

Threat:

Nuclear waste management challenges

One of the key threats to the nuclear energy equipment market is the persistent challenge of nuclear waste management. Long-lived radioactive waste requires secure,

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long-term storage solutions, which remain technically complex and politically sensitive. Public opposition, environmental concerns, and high disposal costs further complicate waste handling infrastructure development. Inadequate disposal systems can hinder nuclear expansion plans and create regulatory delays. These challenges continue to impact public acceptance and long-term sustainability of nuclear energy programs.

Covid-19 Impact:

The Covid-19 pandemic disrupted the nuclear energy equipment market through supply chain interruptions, project delays, and labor shortages. Manufacturing and installation activities were slowed due to lockdown restrictions, affecting equipment delivery schedules. However, the crisis also reinforced the importance of stable and resilient energy systems, supporting long-term interest in nuclear power. Post-pandemic recovery initiatives and renewed infrastructure investments have gradually revived demand, with governments prioritizing energy security and clean energy transitions in strategic planning.

The power generation segment is expected to be the largest during the forecast period

The power generation segment is expected to account for the largest market share during the forecast period, due to its core role in electricity production. Nuclear reactors, turbines, and associated systems are primarily deployed for large-scale baseload power generation. Increasing global electricity demand and the transition toward low-carbon energy sources are boosting investments in nuclear-based power infrastructure. The segment benefits from long operational lifespans and stable output, making it essential for national grids seeking reliable and continuous energy supply.

The nuclear power plants segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the nuclear power plants segment is predicted to witness the highest growth rate, due to0020 rising investments in new plant construction and modernization of aging facilities. Countries are expanding nuclear capacity to meet energy security and emission reduction goals. Deployment of advanced reactors and safety-enhanced designs is accelerating growth. Additionally, supportive government policies and international collaborations are encouraging nuclear infrastructure development, making power plants a key growth driver for equipment demand in the coming years.

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Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, due to rapid industrialization, population growth, and rising electricity demand. Countries such as China, India, and South Korea are heavily investing in nuclear energy expansion to reduce dependence on fossil fuels. Strong government support, large-scale reactor construction projects, and technological advancements are further strengthening regional dominance. The presence of established nuclear programs ensures sustained equipment demand across the region.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, owing to aggressive capacity expansion plans and increasing energy diversification strategies. Emerging economies are adopting nuclear power to meet long-term sustainability and energy security goals. Continuous investments in advanced reactor technologies and infrastructure modernization are fueling growth. Favorable regulatory frameworks and international partnerships further accelerate development, positioning the region as the fastest-growing hub for nuclear energy equipment adoption.

Key players in the market

Some of the key players in Nuclear Energy Equipment Market include Westinghouse Electric Company, GE Vernova Hitachi Nuclear Energy, Rosatom, China National Nuclear Corporation (CNNC), Korea Electric Power Corporation (KEPCO), Toshiba Energy Systems & Solutions Corporation, Mitsubishi Heavy Industries, Orano, BWX Technologies, Inc., NuScale Power Corporation, TerraPower, Kairos Power, Oklo Inc., China General Nuclear Power Group (CGN) and Cameco Corporation.

Key Developments:

In March 2026, Mitsubishi Heavy Industries' latest announcement highlights its push toward strengthening industrial decarbonization through advanced energy and engineering solutions. The initiative focuses on improving efficiency in thermal power systems, expanding low-carbon technologies, and accelerating global energy transition efforts.

In January 2026, Mitsubishi Heavy Industries' collaboration with the Automotive Edge

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Computing Consortium focuses on advancing distributed data processing and optimizing ICT infrastructure for connected mobility systems.

Equipment Types Covered:

- Reactor Equipment
- Auxiliary Equipment
- Instrumentation & Control Systems
- Safety Equipment
- Waste Management Equipment

Reactor Types Covered:

- Pressurized Water Reactors (PWR)
- Boiling Water Reactors (BWR)
- Pressurized Heavy Water Reactors (PHWR)
- Fast Breeder Reactors (FBR)
- Small Modular Reactors (SMRs)
- Advanced Reactors

Installation Types Covered:

- New Installations
- Retrofit & Modernization

Applications Covered:

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- Power Generation
- Research & Development
- Medical Applications
- Industrial Applications

End Users Covered:

- Nuclear Power Plants
- Research Institutes
- Government & Defense Organizations
- Industrial Facilities

Regions Covered:

- North America
  - United States
  - Canada
  - Mexico
- Europe
  - United Kingdom
  - Germany
  - France
  - Italy

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- Spain
- Netherlands
- Belgium
- Sweden
- Switzerland
- Poland
- Rest of Europe

Asia Pacific

- China
- Japan
- India
- South Korea
- Australia
- Indonesia
- Thailand
- Malaysia
- Singapore
- Vietnam
- Rest of Asia Pacific

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South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

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What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) are also represented in the same manner as above.

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