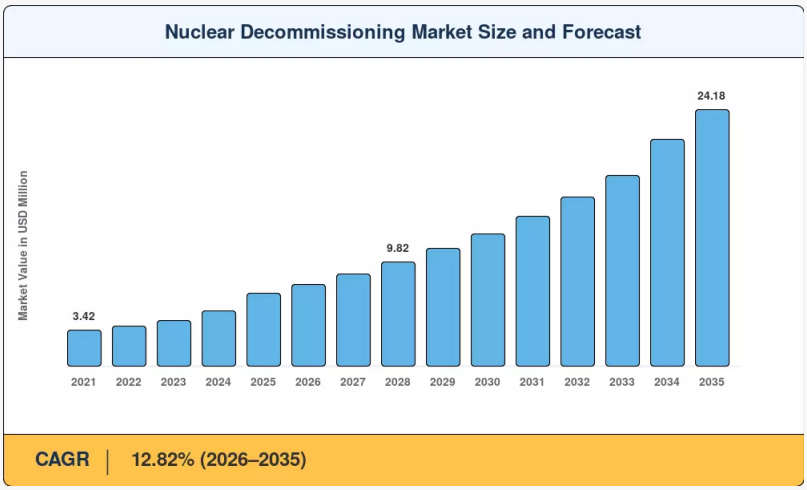
Nuclear Decommissioning Market to Reach USD 24.18 Billion, Registering a CAGR of 12.82% During 2026 to 2035

Nuclear decommissioning market in countries prioritize the safe retirement, dismantling, and environmental remediation of aging nuclear power infrastructure.



nuclear decommissioning market size

NY, CA, UNITED STATES, June 16, 2026 /EINPresswire.com/ -- The global Nuclear Decommissioning Market reached an estimated USD 6.84 billion in 2025 and is projected to grow from USD 7.72 billion in 2026 to USD 24.18 billion by 2035, registering a CAGR of 12.82% during the forecast period (2026–2035). Growing retirement of aging nuclear reactors, increasing regulatory pressure regarding nuclear safety, and rising investments in radioactive waste management are expected to accelerate market expansion globally.

The global nuclear decommissioning market size is witnessing substantial growth as countries increasingly prioritize the safe retirement, dismantling, and environmental remediation of aging nuclear power infrastructure. Nuclear decommissioning refers to the highly regulated process of safely shutting down nuclear facilities, dismantling reactor systems, decontaminating sites, and managing radioactive waste to ensure environmental protection and public safety.

The growing age of nuclear power plants across major economies is emerging as one of the strongest catalysts for market growth. Several reactors commissioned during the 1970s and 1980s are approaching the end of their operational lifecycle, prompting governments and energy operators to initiate large-scale decommissioning programs. As many nuclear facilities transition toward retirement, operators are increasingly investing in advanced dismantling technologies, radiation monitoring systems, and waste disposal solutions to ensure compliance with evolving safety regulations.

Additionally, rising public awareness regarding nuclear safety and environmental sustainability is

encouraging governments to accelerate decommissioning activities for obsolete nuclear infrastructure. Regulatory authorities continue to impose stringent compliance standards governing reactor shutdown, radioactive material handling, and long-term site restoration, further strengthening market demand.

Competitive Landscape
The global nuclear decommissioning market remains highly specialized and technically intensive, with participants focusing on engineering expertise, waste management capabilities, radiation safety technologies, and regulatory compliance. Some of the Listed Companies are, Orano, EnergySolutions, Holtec, Magnox, SOGIN, Westinghouse, GE Hitachi, Bechtel, Veolia Nuclear Solutions, Amentum, others.

Companies operating in the market continue investing in robotic dismantling systems, remote operation technologies, advanced monitoring systems, and project management capabilities to improve decommissioning efficiency and reduce operational risk.

Strategic collaborations between energy operators, engineering firms, government agencies, and waste management providers are expected to remain critical for executing large-scale decommissioning projects successfully.

Increasing complexity surrounding nuclear dismantling timelines, environmental restoration requirements, and radioactive waste disposal is expected to strengthen demand for highly specialized service providers throughout the forecast period.

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Aging Nuclear Infrastructure Driving Market Growth
One of the primary factors supporting nuclear decommissioning market growth is the rising number of aging nuclear reactors approaching retirement worldwide.

Several developed economies operate nuclear reactors that have exceeded or are nearing their licensed operational lifespan. As operational efficiency declines and maintenance requirements increase, energy providers are increasingly opting for structured decommissioning programs to safely retire facilities.

The process of decommissioning includes multiple stages such as plant shutdown, spent fuel management, system dismantling, radioactive material handling, waste processing, and site remediation. These activities require extensive technical expertise, specialized engineering capabilities, and strict regulatory oversight, creating significant opportunities for service providers operating within the nuclear ecosystem.

Furthermore, growing investments in renewable energy infrastructure and energy transition strategies are encouraging several countries to gradually reduce dependency on aging nuclear

facilities, contributing to increased decommissioning activities.

Governments are also prioritizing site rehabilitation and environmental restoration to ensure former nuclear sites can be repurposed for future industrial, energy, or public-use applications.

Increasing Regulatory Focus on Nuclear Safety and Waste Management
Stringent nuclear safety regulations remain another major factor contributing to market growth.

Government authorities and international nuclear agencies continue to strengthen frameworks governing reactor retirement, radioactive contamination management, and long-term environmental protection. Nuclear decommissioning projects require extensive compliance with radiation exposure limits, waste handling standards, environmental monitoring, and worker safety protocols.

Safe disposal of radioactive waste remains one of the most complex challenges associated with nuclear plant retirement. As a result, significant investments are being directed toward waste packaging technologies, storage facilities, transportation systems, and disposal infrastructure.

Countries with aging nuclear fleets are increasingly adopting structured decommissioning frameworks to reduce long-term environmental risks and improve public trust regarding nuclear safety practices.

Growing regulatory emphasis on transparency, safety assessments, and long-term contamination control is expected to further support market expansion during the forecast period.

Technological Advancements Supporting Efficient Decommissioning
Technological innovation is playing an increasingly important role in improving the efficiency and safety of nuclear decommissioning operations.

Advanced robotics, remote handling systems, automated dismantling technologies, radiation monitoring equipment, and digital modeling platforms are helping operators reduce worker exposure while improving project execution accuracy.

Robotic systems are increasingly being deployed in high-radiation environments where human intervention remains limited. These technologies support reactor dismantling, radioactive material handling, and contamination measurement while improving operational safety.

Digital twin technologies and simulation tools are also helping project teams improve planning, estimate costs, optimize timelines, and reduce unexpected operational risks during dismantling phases.

As decommissioning projects become more technically demanding, increasing technology adoption is expected to remain a key competitive differentiator among market participants.

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Segment Analysis
The nuclear decommissioning market is segmented based on reactor type, strategy, capacity, and region.

Based on reactor type, the market includes Pressurized Water Reactor (PWR), Boiling Water Reactor (BWR), and Gas-Cooled Reactor (GCR). Pressurized Water Reactors continue to represent a significant share of decommissioning activity due to their widespread deployment across several nuclear-producing countries. However, Boiling Water Reactors and Gas-Cooled Reactors are also expected to contribute substantially as aging facilities move toward retirement.

By strategy, the market is segmented into immediate dismantling, deferred dismantling, and others. Immediate dismantling strategies are increasingly being adopted due to growing pressure to reduce long-term safety risks and accelerate site restoration activities. Deferred dismantling approaches remain important in facilities where operators prefer delayed dismantling to reduce radiation exposure levels over time.

Based on capacity, the market includes up to 800 MW, 801 MW–1000 MW, above 1000 MW, and others. Facilities above 1000 MW are expected to represent a significant market share due to the increasing retirement of high-capacity nuclear power plants requiring extensive dismantling operations and waste management services.

Meanwhile, reactors within the 801 MW–1000 MW range continue to contribute significantly to global decommissioning activities as several mature nuclear facilities approach retirement timelines.

Regional Insights
North America continues to represent a major market for nuclear decommissioning due to the presence of aging nuclear reactors, strong regulatory frameworks, and extensive investments in nuclear safety management. The region continues to witness increasing decommissioning activity as operators retire older plants and modernize energy infrastructure.

The United States remains one of the leading contributors due to its large installed nuclear capacity and growing number of reactors approaching decommissioning stages.

Europe is expected to maintain strong market momentum due to aging nuclear fleets and stringent environmental regulations. Countries such as Germany, France, and the United Kingdom continue to accelerate decommissioning activities amid broader energy transition

policies and nuclear safety priorities.

The region also benefits from strong institutional frameworks governing radioactive waste handling and long-term environmental remediation.

Asia-Pacific is anticipated to witness considerable market growth during the forecast period as countries strengthen nuclear safety frameworks and modernize older energy assets. Increasing government focus on safe nuclear operations and waste management practices is expected to contribute to market expansion.

Countries such as Japan are expected to remain particularly important due to increased emphasis on nuclear facility safety, regulatory modernization, and decommissioning investments.

Meanwhile, the Rest of the World market is projected to experience gradual growth supported by increasing regulatory awareness and expanding energy infrastructure transitions.

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Future Outlook
The future outlook for the nuclear decommissioning market remains highly positive as aging reactor fleets continue approaching retirement and governments strengthen nuclear safety priorities.

Growing investments in environmental remediation, radioactive waste handling, and nuclear infrastructure modernization are expected to support long-term market growth.

Technological advancements in robotics, digital planning, and remote dismantling are expected to improve project efficiency while reducing worker safety risks and operational costs.

As governments increasingly prioritize sustainable energy transitions and long-term nuclear safety, decommissioning activities are expected to expand significantly across major nuclear economies.

Supported by rising reactor retirements, strict regulatory oversight, and increasing investments in safe facility dismantling, the global Nuclear Decommissioning Market is projected to reach USD 24.18 billion by 2035, maintaining strong double-digit growth momentum throughout the forecast period.

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