

Nuclear Decommissioning Services Market Forecasts to 2032 – Global Analysis By Reactor Type (Pressurized Water Reactor (PWR), Boiling Water Reactor (BWR), Pressurized Heavy Water Reactor, Gas-Cooled Reactor, and Other Reactor Types), Decommissioning Strategy (Immediate Dismantling (DECON), Safe Enclosure (SAFSTOR), and Entombment (ENTOMB)), Capacity, Service Type, End User, and By Geography

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Abstracts

According to Statistics MRC, the Global Nuclear Decommissioning Services Market is accounted for \$8.9 billion in 2025 and is expected to reach \$12.3 billion by 2032, growing at a CAGR of 4.7% during the forecast period. Nuclear decommissioning services cover companies that plan, dismantle, decontaminate, and manage radioactive waste from nuclear facilities reaching the end of life. It includes engineering assessments, reactor segmentation, spent-fuel handling, environmental remediation, regulatory compliance, and long-term site monitoring, enabling safe facility retirement, reduced radiological risks, controlled material disposal, and responsible land restoration while supporting governments and operators in meeting strict safety and environmental standards.

According to the IAEA and OECD/NEA analyses, over 200 nuclear power reactors have already been retired from service.

Market Dynamics:

Driver:

Aging nuclear power plants reaching end-of-life

The primary market driver is the significant cohort of nuclear power plants, particularly those built in the 1970s and 80s, now reaching or exceeding their designed operational lifespan. This creates a predictable and growing pipeline of decommissioning projects. Regulatory frameworks in many countries mandate the decommissioning of these facilities, transforming aging infrastructure from an operational asset into a required service. This consistent, non-discretionary demand establishes a solid foundation for market growth, ensuring a steady stream of contracts for specialized decommissioning firms over the coming decades.

Restraint:

High costs and financial challenges

The immense financial burden of decommissioning acts as a major market restraint. Projects often require billions of dollars, covering complex tasks like radioactive waste handling, safe dismantling, and site remediation. Furthermore, securing and managing these funds over long periods presents a challenge, with risks of insufficiently funded liabilities. These staggering costs can lead to project delays or political hesitation, as governments and utilities weigh the financial impact, potentially slowing the pace at which new decommissioning projects are initiated and completed.

Opportunity:

International collaboration and knowledge sharing

Enhanced international cooperation presents a significant opportunity, particularly for nations with nascent decommissioning programs. By sharing best practices, technological innovations, and lessons learned from established projects, the global industry can drive down costs and improve efficiency. This collaboration facilitates the standardization of procedures and fosters the development of specialized expertise for global deployment. Moreover, it opens avenues for established service providers to enter new international markets, offering their specialized skills and accelerating decommissioning efforts worldwide.

Threat:

Political and social opposition to nuclear energy

Opposition can influence government policy, leading to accelerated nuclear phase-outs without adequate decommissioning planning or, conversely, to political support for life-extension programs that delay decommissioning work. This uncertainty can disrupt the project pipeline and deter long-term investment in decommissioning technologies and workforce development. Additionally, social pressure can complicate regulatory approvals and site-specific activities, creating operational and reputational risks for companies in this sector.

Covid-19 Impact:

The pandemic initially disrupted the nuclear decommissioning market through supply chain bottlenecks, workforce shortages due to lockdowns and illness, and project delays from mandated site access restrictions. This led to increased costs and schedule overruns for active projects. However, the essential nature of nuclear safety and regulatory obligations ensured that critical work continued, with adaptations for safety. The market has demonstrated resilience, with recovery driven by pent-up demand and the immutable fact that aging nuclear assets still require decommissioning, making the long-term impact moderately contained.

The pressurized water reactor (PWR) segment is expected to be the largest during the forecast period

The pressurized water reactor (PWR) segment is expected to account for the largest market share during the forecast period, attributable to its widespread adoption as the most common reactor design in the global nuclear fleet, particularly in North America and Europe. This large installed base translates into a proportionally higher number of PWR units now entering decommissioning phases. The extensive experience and established protocols for dismantling PWRs create a more mature and predictable service market for this segment compared to other, less common reactor types, ensuring its leading volume share for the foreseeable future.

The immediate dismantling (DECON) segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the immediate dismantling (DECON) segment is predicted to witness the highest growth rate due to its advantages over deferred options, driving its

high growth rate. This method reduces long-term liability and security costs for operators by completing the process within a shorter timeframe. Furthermore, regulatory trends are increasingly favoring prompt site release, and advances in robotics and waste handling now make rapid dismantling more technically and economically feasible. This shift allows utilities to reclaim sites for other uses sooner, a significant financial and community benefit.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market share due to proactive policy decisions, such as Germany's complete nuclear phase-out and similar commitments in other member states like Belgium and Spain. Ageing reactors, now permanently shut down in the region, create a concentrated and immediate demand for decommissioning services. Europe's well-established regulatory bodies and significant government oversight further solidify its position as the current epicenter for decommissioning activity and expenditure.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, primarily fueled by Japan's accelerated decommissioning program following the Fukushima Daiichi accident, which represents a massive and complex undertaking. Additionally, countries like South Korea are embarking on their first major decommissioning projects as early reactors are retired. The growing need to develop local expertise and infrastructure to manage these projects will drive rapid market expansion.

Key players in the market

Some of the key players in Nuclear Decommissioning Services Market include AECOM, Bechtel Corporation, Westinghouse Electric Company LLC, EnergySolutions, Orano, Jacobs Solutions Inc., Fluor Corporation, Babcock International Group plc, Studsvik AB, NUVA Group, GD Energy Services SAS, ENERCON GmbH, Holtec International, AtkinsR?alis Group Inc., Wood plc, and Framatome.

Key Developments:

In October 2025, Bechtel and the US Department of Energy commenced nuclear vitrification operations at the Hanford site's Waste Treatment and Immobilization Plant,

marking a milestone in handling legacy nuclear waste from the Manhattan Project and Cold War.

In June 2025, Babcock secured a three-year, ?114 million contract to prepare for nuclear defueling of decommissioned Trafalgar Class submarines, a key enabler for the broader UK Submarine Dismantling Project.

Reactor Types Covered:

Pressurized Water Reactor (PWR)

Boiling Water Reactor (BWR)

Pressurized Heavy Water Reactor

Gas-Cooled Reactor

Other Reactor Types

Decommissioning Strategies Covered:

Immediate Dismantling (DECON)

Safe Enclosure (SAFSTOR)

Entombment (ENTOMB)

Capacities Covered:

Below 100 MW

100 %- %1000 MW

Above 1000 MW

Service Types Covered:

Pre-Decommissioning Services

Facility Decontamination & Dismantling Services

Waste Management Services

Site Remediation and Site Release Services

Other Support Services

End Users Covered:

Commercial Power Reactors

Research Reactors

Military/Prototype Reactors

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

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 2024, 2025, 2026, 2028, and 2032
- 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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