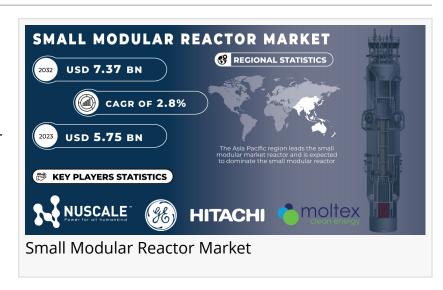


# Small Modular Reactor Market Poised for Growth with Rising Clean Energy Demand and Technological Advancements

Small Modular Reactor (SMR) market will see tremendous growth based on the growing demand for clean, reliable energy, technological advancements.

AUSTIN, TX, UNITED STATES, November 14, 2024 /EINPresswire.com/ -- The Small Modular Reactor Market was valued at USD 5.75 Billion in 2023 and is projected to reach USD 7.37 Billion by 2032, growing at a compound annual growth rate (CAGR) of 2.8% from 2024 to 2032.



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The SMR market is expected to experience significant growth in the clean reliable, efficient source of energy, primarily in countries that seek to meet more stringent carbon-reduction targets by incorporating nuclear as an alternative to a diverse mix of power solutions. Because it can provide faster construction time while lowering the costs incurred for both developed and developing markets, this module is likely to be adopted by virtually any country seeking cleaner power to complement existing fossil fuels for electricity.

Future opportunities in the SMR market look bright, considering the speed at which technology is being enhanced and the support from the regulatory side, which opens up a market for greater adoption. Besides this, SMRs are very useful for serving remote areas as well as backup power during peak demand. Cooperation among the government, industry players, and research institutions will promote innovation and deployment and ensure the place of SMRs in the global shift towards sustainable energy.

The primary driver for the expansion of the Small Modular Reactor (SMR) market is the global rising demand for clean energy. Nations are looking to find ways to reduce carbon emissions while transitioning to sustainable sources of energy, and the low-carbon electricity from the SMRs with the increased safety features makes it efficient. They can be put in various settings like the remote and underserved ones, which makes it appealing for meeting energy needs.

Growing Demand for Reliable and Affordable Power Sources Fuels Small Modular Reactor Market Expansion

Highly driving the market of Small Modular Reactors are the requirements for reliable, affordable power sources. Because of increased energy demands coupled with traditional infrastructures getting increasingly difficult to deal with, the solution SMRs are offering is very inviting to the world as being presented with consistent and relatively cheap electricity. Being small, and in a modular setup, quicker deployment is faster and has lower capital cost and therefore can be spread out to a larger audience than any other alternatives.

Power generation is the main end-user industry for Small Modular Reactor in 2023 and, thus, acquired the largest market share through revenues as this segment is crucial in satisfying a fast-growing and increasing world population with their high energy demand. The applicability of SMRs is maximized, especially as economies turn toward clean sources for power supply as they offer reliable low-carbon power supply options. These modules can be even spread over locations in different parts of a country.

In 2023, the grid-connected dominated the Small Modular Reactor market with the highest revenue market share because it enhances grid stability and reliability. With the transition of nations towards cleaner energy systems, the most essential component is found in SMRs, as they offer consistent baseload power for supporting intermittent renewable sources. Their adaptability to existing infrastructures of a grid enables integration without any obstacles, making them the ideal choice for utilities seeking to serve growing regulatory and energy needs.

Asia Pacific Emerges as the Dominant Force in the Small Modular Reactor Market with Strong

# **Growth Projections**

Asia Pacific is likely to be the region leading the SMR market in 2023 due to its high revenue share, rapid industrialization, and increasing energy requirements. The region's countries are heavily investing in nuclear technology for diversified energy mixes and energy security. Cleaner sources of power and the replacement of aging infrastructure further boost growth in this region. In addition, Asia Pacific is likely to experience the highest compound annual growth rate from 2024 to 2032 due to the supportive policies and regulatory frameworks that are being implemented by governments for the deployment of SMRs.

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By Reactor Type

☐ Heavy Water Reactor (HWR)
☐ Light Water Reactor (LWR)
☐ High-Temperature Reactor (HTR)
☐ Molten Salt Reactor (MSR)
☐ Fast Neutron Reactor (FNR)

By Coolant

□Water

□Gases

□Molten Salt

☐Heavy liquid Metals

By Connectivity

□Off-Grid

□Grid-Connected

By Deployment

☐Single-Module Power Plant ☐Multi-Module Power Plant

By Location

□Marine

□Land

# By Application

Desalination

□Power Generation

□Process Heat

Industrial

☐Hydrogen Production

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□In 2024, NuScale Power unveiled its innovative SMR technology, which is fueled by the NuScale Power Module<sup>™</sup>. Every unit produces 77 MWe, and the setup can increase to 924 MWe with adaptable arrangements.

□In January 2024, a two-phase generic design assessment (GDA) for GE Hitachi's BWRX-300 small modular reactor (SMR) design was started by the Office for Nuclear Regulation (ONR), the Environment Agency, and Natural Resources Wales.

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□NuScale Power LLC

☐GE Hitachi Nuclear Energy

☐Moltex Energy

□X-energy

□Rolls-Royce

□Ultra-Safe Nuclear

☐Westinghouse Electric Corporation

☐Terrestrial Energy Inc.

☐Toshiba Energy Systems and Solutions

□General Atomics

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