



The Role of Nuclear Energy in the Modern World: Benefits, Challenges, and Future Prospects

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Nuclear energy is a pivotal component of the contemporary energy landscape, offering a low-carbon alternative to fossil fuels in the context of increasing global energy demands and climate change mitigation. This article examines the multifaceted role of nuclear energy, highlighting its significant benefits, such as low greenhouse gas emissions, high energy density, and reliability as a key asset in the transition toward decarbonization, nuclear energy's future will depend on effective policy and its integration with renewable energy sources, making it essential to explore its potential in addressing global energy challenges. This article aims to provide a comprehensive overview of nuclear energy's current state and future prospects in a rapidly evolving energy market.

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