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## **Towards a Sustainable Future: SMR Smart Net Zero City**

As cities globally strive for sustainability, the concept of SMR Smart Net Zero City (SSNC) emerges as a pivotal solution. This paper explores the framework and strategies for establishing SSNC, focusing on leveraging Small Modular Reactor (SMR) as a foundational energy element.

By integrating versatility of SMR with advanced technologies like IoT and AI, SSNC can achieve efficient energy management, demand response, and renewable energy integration. The paper discusses key components such as smart grids, energy storage systems, and intelligent energy management systems, emphasizing their role in optimizing energy consumption and reducing carbon emissions. Several virtual cities created based on actual energy production and consumption data simulate carbon reductions and energy costs to demonstrate the feasibility and benefits of SSNC implementation.

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### **Confirm that the work is original and has not been published anywhere else**

yes

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