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Deployment and uses of Floating Nuclear Power Plants powered by Small Modular Reactors

Floating Nuclear Power Plants (FNPPs) emerge as a pivotal solution for swiftly deploying additional power generation capacity in a cost-effective and scalable manner. Particularly suited for coastal regions facing energy access challenges or where the construction of terrestrial nuclear power facilities is impractical, FNPPs offer a versatile and innovative approach to energy provision. This paper delves into the technical strategies for integrating Small Modular Reactors (SMRs) into these marine platforms, featuring qualitative analyses of various hull designs to ascertain the most effective configurations. Moreover, it presents a comprehensive exploration of the multifaceted applications of SMRs within FNPPs, including their role in powering desalination plants and the production of e-fuels. This examination underscores the transformative potential of FNPPs in addressing global energy needs, highlighting their flexibility, efficiency, and broad utility in supporting sustainable development goals.

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

YES

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