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3S APPROACH TO BRING NUCLEAR ENERGY TO WHERE IT'S NEEDED

Nuclear energy has the potential to substantially help resolve the three biggest energy challenges faced today: mitigating both climate change and energy poverty while bringing greater energy security to where the energy is actually needed.

Small Modular Reactors as well as Microreactors extend the applications of conventional large nuclear power plants to electric and non-electric, present new deployment models, intend to have shorter construction times, lower capital costs, served as the perfect combination for a sustainable power mix supporting renewables as a baseload and/or load following, and advanced technologies include safety, security, and safeguards by design (3S). One of the most attractive concepts of SMRs & MR is the possibility of being transported to places where energy is needed, remote places and industrial sites for example.

Prodigy is developing nuclear oversight and quality assurance models for shipyard fabrication, transport, fuel handling and decommissioning to support sustainable project execution.

The paper presents a strategy for successful emergence of Transportable and marine-deployed nuclear power based on realistic and highly replicable technologies, licensable under current regimes, that can meet immediate commercial need with market entry achievable in the short term needed. Several examples are illustrated; for SMR and Microreactor, for several sites, and to replaced coastal fossil fired generation.

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