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Optimal Deployment of Advanced Modular Reactors in Different Regions until 2050

Advanced modular reactors (AMRs) are small modular reactors (SMRs) of the 4th generation that offer safety, efficiency, flexibility, fuel cycle completion, to complement the current reactors. This presentation aims to explore the optimal deployment of AMRs in different regions, namely France, Europe, North America, Japan, South Korea, and China, until 2050, considering the current phases of deployment of reactors of the 3rd generation. The presentation will compare the technical, economic, and environmental factors that influence the feasibility and attractiveness of AMRs in each region, such as the existing nuclear infrastructure, the electricity demand, the regulatory framework, the public acceptance, the cost and financing, and the potential for innovation and collaboration. The presentation will also discuss the challenges and opportunities for the global development and deployment of AMRs, such as the harmonization of standards and licensing, the sharing of best practices and lessons learned, the cooperation on research and development, and the promotion of AMR nuclear energy as a safe, clean and reliable source of electricity or alternative energy vector supply.

Country OR International Organization

France

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

YES

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Track Classification: Topical Group D: Considerations to Facilitate Deployment of SMRs: Track 15: Financing, Cost & Economic Appraisals and Contracting Approaches for SMR Projects