

Session Title: Innovations in Nuclear Energy

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Abstract Title: Integrated system approach and Multidisciplinarity to Foster energy innovations transfers towards business activity

The French Alternative Energies and Atomic Energy Commission (CEA) is a key player in research, development and innovation in four main areas: defence and security, low carbon energies (nuclear and renewable energies), technological research for industry, fundamental research in the physical sciences and life sciences.

The CEA is responsible for research and innovation programmes in two key areas: supporting the French nuclear industry, and developing the future nuclear systems called Generation IV. Thanks to its long-standing activities in the nuclear field, the CEA has also built up expertise in nuclear radiobiology and toxicology.

CEA has been heavily involved in renewable energies for about thirty years and is mainly focusing on solar energy (thermal and photovoltaic) and its integration in buildings, batteries and hydrogen systems, electric mobility.

CEA develop an integrated approach for free CO₂ energy from production (nuclear and renewable) to storage (batteries and hydrogen) including energy building efficiency and e-mobility. This approach aims to combine research on technologies, interactions and systems in order to build a global to face environmental crisis.