

IAEA Scientific Forum on Nuclear Fuel Cycle Issues & Challenges, 21-22 September 2004

Summary of Session 1: “Advanced Fuel Cycles and Reactor Concepts”

During the opening session of the Scientific Forum presentations were made by the IAEA Director General, Mohamed ElBaradei, Mr. Carlo Rubbia from Italy, and by the Chairman of the Scientific Forum, Mr. B. Bigot from France. Mr. A. Kakodkar from India was the moderator of the session. The audience included some 180 participants. Four keynote speakers from the UK, Argentina, Japan and India as well as one panelist from the USA contributed to the first session.

The highlights can be summarized as follows:

Nuclear energy as an emission free energy source is indispensable for sustainable development. The importance of continuous R&D in support of innovative reactors and fuel cycles was stressed. The overall goal for these technologies includes better uranium resource utilization and improved waste management strategies. Moreover, the development of accelerator-driven systems for transmutation and energy production is regarded as an important long-term option. In this respect the closure of the fuel cycle with fast reactors is considered to be essential. In meeting these objectives, a focus on economics, proliferation resistance, and safety is paramount. The transition to innovative nuclear energy systems from current systems must be gradual via a combination of evolutionary and innovative technologies.