

# International Conference on Management of Spent Fuel from Nuclear Power Reactors: An Integrated Approach to the Back End of the Fuel Cycle



Contribution ID: 33

Type: ORAL

## China Spent Fuel Management Strategy and R&D

China has drawn up a great nuclear power programme to satisfy the clear energy requirements of the sustainable development of the economy and society. Currently, there are about 22 nuclear power plant reactors opening and the installed capacity is about 21000MWe. The total installed nuclear power capacity will achieve 58000MWe in 2020 and the installed capacity of nuclear power plants under constructing is about 30000MW at that time. If the onsite storage time of the spent fuel is five years, the amount of spent fuel assemblies that should be transported to the reprocessing plant will increase rapidly from about 100 to more than 1000, and nearly about 3000 in the year of 2015, 2020 and 2025, respectively.

Because the spent fuel management is very important for the safely use of nuclear power, China gives a great effort to promote the technology and the industry abilities in the fields of spent fuel storage, transport and reprocessing. Based on the new technical standards, especially after the Fukushima disaster, measures such as water position monitoring, automatic water filling systems, and—if it is needed—additional neutron poison that avoiding critical accident, are used at the onsite spent fuel storage pools. R&D programmes developing spent nuclear fuel transport cask as well as dry storage technology are carrying out. According to the close nuclear fuel circle policy, China develops reprocessing technology actively focused on the advanced PUREX with a more simplified process, no salts reducing agent, and achieving the nonproliferation goals. Through the independent design and construction or international cooperation, it is expected that a commercial reprocessing plant will be completed in 2030.

Under the IAEA's safeguards framework, China is willing to cooperate and exchange extensively with other countries in the field of spent fuel management.

### Country/ int. organization

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