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Session 3:

Title: International Nuclear Fuel Cycle and Nuclear Non-Proliferation

The fresh fuel would be guaranteed by market mechanism based on the contracts made with the fuel service providers. If a supply disruption suspicious of a political nature occurs, an international system could make fresh fuel available for the affected parties. The ability to provide such fuel-supply assurance could minimize or eliminate the incentives for the newcomer countries to acquire their own enrichment capabilities. At the same time, the ability to provide assurance that the spent fuel could be managed properly is equally important. Such assurance may include spent fuel take-back/take-away, interim storage, reprocessing, and spent fuel/HLW repository disposal. The peaceful utilization of plutonium separated from reprocessing is particularly essential for a sustainable nuclear future. Such utilization must comply with the most stringent safety, safeguards and security (3S) requirements. To be accepted by the international community, it is expected that such concept of an international (or regional) system of nuclear fuel cycle should fulfill the needs of nuclear energy security and non-proliferation. A concept of an international nuclear fuel cycle system, involving multi-national control of the fuel-cycle facilities, reliable fresh fuel supply, spent fuel management, and peaceful plutonium utilization, is proposed by the Non-proliferation Study Committee at Tokyo University, where the fuel-cycle services could be provided without discrimination, and meet the international safety, safeguards, and security requirements.. Such a multilateral approach could reduce the proliferation risks by the host country and hence, could lessen its burden of safeguards requirements.