Multilateralization of the Nuclear Fuel Cycle: Assessing the Existing Proposals

Yuri Yudin
Senior Researcher and Project Manager
United Nations Institute for Disarmament Research
An Idea Whose Time Has Come

“Bold measures, including assurances of nuclear fuel supply and multinationalizing sensitive parts of the nuclear fuel cycle are vital if we are to enlarge the contribution of atomic energy to peace, health and prosperity throughout the world while curbing the proliferation of nuclear weapons and eliminating them altogether.”

Introductory Statement to the Board of Governors by IAEA Director General Dr. Mohamed ElBaradei
2 March 2009
Developing a New Mechanism

IAEA Director General proposed a three-stage process in developing a new multilateral mechanism:

- the first step would be to establish a *system for assuring supply* of fuel for nuclear power reactors;
- the second step would be to have all *new* enrichment and reprocessing activities in future put exclusively under multilateral control; and
- the third step would be to convert all *existing* enrichment and reprocessing facilities from national to multilateral operations.
Existing Proposals (1)

- United States’ Proposal on a nationally-controlled reserve of low-enriched uranium (LEU)
- Russian Global Nuclear Power Infrastructure
- United States’ Global Nuclear Energy Partnership
- World Nuclear Association (WNA) Proposal
- Six-Country (France, Germany, the Netherlands, Russia, the United Kingdom, and the United States) Concept
- Japan’s Standby Arrangements Proposal
Existing Proposals (2)

- Nuclear Threat Initiative (NTI) Fuel Bank
- United Kingdom’s Nuclear Fuel Assurance Proposal
- Russian International Uranium Enrichment Center (IUEC) in Angarsk
- German Multilateral Enrichment Sanctuary Project (MESP)
- Austria’s Proposal on Multilateralization of the Nuclear Fuel Cycle
- EU Proposal on Nuclear Fuel Cycle
Points of Agreement

- any multilateral mechanism should not disturb the international market for nuclear fuel cycle services;
- the establishment of multilateral fuel cycle arrangements should be implemented step by step;
- there would be no uniform approach that would be satisfactory for all technologies and all countries and that successful implementation of the multilateralization would depend on the flexibility of its application.
Far-Reaching Visions (1)

- **Russian Global Nuclear Power Infrastructure**

  A system of international centers providing complete set of fuel cycle services on a non-discriminatory basis and under the IAEA control

- **United States’ Global Nuclear Energy Partnership**

  Front-end and back-end fuel-cycle services provided by a limited number of supplier states using new proliferation-resistant technologies
Far-Reaching Visions (2)

Austria’s Proposal on Multilateralization of the Nuclear Fuel Cycle

Placement of all enrichment and reprocessing facilities and nuclear fuel supply activities worldwide under multilateral control
More Specific Proposals (1)

- World Nuclear Association (WNA) Proposal
- Six-Country (France, Germany, the Netherlands, Russia, the United Kingdom, and the United States) Concept
- United Kingdom’s Nuclear Fuel Assurance Proposal
- Japan’s Standby Arrangements Proposal

Backup arrangements in addition to the existing commercial uranium market
More Specific Proposals (2)

- Russian Guaranteed Reserve of LEU in Angarsk
- Nuclear Threat Initiative (NTI) Fuel Bank
- U.S. Reserve of LEU
- World Nuclear Association (WNA) Proposal
- Six-Country (France, Germany, the Netherlands, Russia, the United Kingdom, and the United States) Concept

Establishment of nationally-controlled or IAEA-controlled reserves of low-enriched uranium
More Specific Proposals (3)

- **Russian IUEC in Angarsk**
  Creation of an international uranium enrichment center based on the existing national enrichment facility

- **German Multilateral Enrichment Sanctuary Project (MESP)**
  Establishment of a new IAEA-controlled multinational uranium enrichment facility in an extraterritorial area
Implementation Policies (1)

- U.S. Reserve of LEU
- Russian IUEC in Angarsk
- World Nuclear Association (WNA) Proposal
- Six-Country (France, Germany, the Netherlands, Russia, the United Kingdom, and the United States) Concept
- Japan’s Standby Arrangements Proposal
- United Kingdom’s Nuclear Fuel Assurance Proposal

Rely on great extent on national policies and existing infrastructure
Implementation Policies (2)

- NTI/IAEA Fuel Bank
- German Multilateral Enrichment Sanctuary Project (MESP)

Projects that would require substantial efforts to create the necessary political, legal, financial and physical conditions
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Additional Motivations

Proposals that respond to the “entitlement” motivation of the customer states – in terms of their participation in ownership, management, operation, decision-making, profit-sharing – perhaps would be more attractive than just backup supply mechanisms for the existing market.

Proposals that would include taking away spent nuclear fuel after it was used and providing other back-end services would create stronger incentives to rely on international mechanisms for fuel supply.
Diversity of Approaches

There would be no single multilateral formula that would be satisfactory for all technologies and all countries. The establishment of multilateral fuel cycle arrangements should be implemented step by step, with existing proposals pursued on their own merits drawing important lessons for the future. The IAEA and its member states should support a broad menu of these proposals.
Rights of Customer States

Multilateral nuclear fuel cycle mechanisms should not deprive customer states from their rights under the NPT and IAEA Stature. Instead they should offer palatable political and economic incentives as well as provide “entitlement” motivation to participate. The issue of a multilateral approach to the nuclear fuel cycle needs to be addressed in terms of opportunity and advantage, not in terms of denial.
Broad Agreement Needed

Any real progress toward a multilateral approach to the nuclear fuel cycle can be achieved only in the context of broad agreement that in the face of global problems such as nuclear proliferation and nuclear terrorism, an international non-discriminatory nuclear fuel cycle control regime has the potential to benefit the whole mankind.
Thank you for your attention!

Questions?

Contact:
Yury Yudin
Senior Researcher and Project Manager, UNIDIR
Project ‘Multilateral Approaches to the Nuclear Fuel Cycle’
yyudin@unog.ch
+41 (0)22 917 14 40