

MIT Workshop on Internationalizing Uranium Enrichment Facilities

Focusing the Discussion

We hope that the presenters at the workshop will use their time to address the issues we have identified as important for consideration and discussion during each session. These points are listed below:

Session One: What problems does internationalizing the fuel cycle address?

- Does internationalizing uranium enrichment (or the entire fuel cycle) increase the reliability of supply?
- How does it increase the barriers against proliferation? Increase the safety and security of enrichment centers?
- How should costs and equity be shared in international enrichment ventures?

Session Two; Economic Analysis of Multinational Enrichment Centers

- How are multinational enrichment centers affected by economies of scale?
- What are the costs of entry into the enrichment market? How would new suppliers affect the current market?
- What are the economic motivations for creating new multinational enrichment centers?
- What are the pros and cons of investment in new enrichment facilities vs. other methods of assuring reliable supply?
- How would lease arrangements work? (How should the capital requirement be translated into leasing rates?)
- What are the important non-economic factors in weighing a decision to create new multinational enrichment centers?

Session Three (Part 1): Models of Multinational Enrichment Facilities: Existing Industrial Models

- What methods of governance and decision making are used?
- How are costs and profits shared? (What general principles are used to determine these divisions?)
- What special security and nonproliferation barriers are in place because of the multinational aspects of the corporation?

Session Three (Part 2): Models of Multinational Enrichment Facilities: New Concepts

- What methods of governance and decision making would be used?
- How are costs and profits to be shared? (What general principles would be used to determine these divisions?)
- What special security and nonproliferation barriers are needed because of the multinational aspects of the corporation?

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Session Four: Improving Proliferation Barriers for Multinational Enrichment Center

- What are the current methods for detection of covert HEU and excess LEU production at centrifuge enrichment plants safeguarded by the IAEA;
- What improvements are possible in such methods?
- What special non-proliferation barriers are needed at multinational plants, e.g., "black-boxing".
- Black boxing as regards to centrifuges and lasers, Limited Frequency Unannounced Access, Discovery of covert facilities using "social mechanisms"
- What special proliferation barriers are needed or are supplied by having multinational enrichment centers?
- What role should the IAEA play in international enrichment centers?
- What monitoring and verification methods are currently being used (by, for instance, URENCO) and how would they be applied in new international enrichment centers?

Session Five: International Frameworks—Legal Structures, NSG, etc.

- What needs to be changed?
- What are the legal implications?
- How to frame an agreement to get consensus. What is the view from non-supplier countries re the nuclear renaissance?
- How can we frame an agreement to get consensus to blocking national enrichment centers?
- Are non-supplier countries willing to forego national enrichment centers?
- How has the US-India deal affected the NSG and its guidelines?

Session Six: Responding to needs in: Asia/Pacific, Middle East, Africa, South America, North America

- Are there regional issues/problems that either are especially suited for international enrichment centers or that would make such centers especially difficult to implement?
- What are the regional energy requirements? Future prospects for nuclear energy in the region?
- On what time frame would multinational enrichment facilities should/need to be brought into operation? How does this timeframe affect the prospects for multinational enrichment centers?
- How would a regional multinational enrichment facility affect the regional security issues?
- Who would be likely candidates for joining/hosting such multinational centers?

Session Seven: The relationship between multinationalization of the fuel cycle and nuclear disarmament

- How does limiting enrichment facilities to multinational consortiums effect non-nuclear weapons states? Will it be an acceptable way of sharing the profits from a future nuclear renaissance? Or will it be seen as another way of denying them access to nuclear technology?

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- Considering that there will be an NPT review in 2010, what policy initiatives should be pursued toward internationalizing the fuel cycle?
- What should be done with nuclear weapon state's enrichment facilities? What is the relationship between multinational enrichment centers in weapons states and the Fissile Material Cutoff Treat?
- Is multinationalizing USEC the only way of saving it?

Session Eight: Wrap up and conclusions

- Internationalizing uranium enrichment facilities
- How should the NSG Guidelines be changed to encourage/require only dealing with those enrichment centers that are multinational?
- What are the attitudes of nations toward multinational enrichment centers?
- How to link nuclear disarmament and the fuel cycle?
- What needs to be done between now and the 2010 NPT Review Conference?