

Relationship between Multinationalization of the Fuel Cycle and Nuclear Disarmament

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Workshop on Internationalizing Uranium Enrichment Facilities
Massachusetts Institute of Technology
20-21 October 2008

I shouldn't admit this, but I came here without any prepared remarks or PowerPoint slides. But this leaves me free to reflect on what I've heard at this meeting, and how it relates to the subject of this session.

What I've heard is, quite frankly, a bit discouraging. It's left me pessimistic about the potential of multilateralization or internationalization of enrichment facilities to provide significant security benefits, if these initiatives are pursued in an incremental or piecemeal fashion.

I think that we have to keep our eye on the purpose or goals of internationalization of fuel cycle facilities. As Pierre Goldschmidt and others have pointed out, there are two goals:

To provide assurance of fuel supply

To prevent the spread of sensitive technologies, and the creation of virtual weapon states

These goals are related, in that we hope that providing assurance of fuel supply will discourage some states from developing enrichment facilities. But as Pierre and Jim Timbe pointed out, the fuel supply problem is not very serious and it can be easily addressed by incremental measures, such as establishing long-term fuel-supply contracts and a fuel bank.

Unfortunately, this does little to address the second goal, and does nothing about the hard cases. And by the hard cases I don't mean only Iran. Ten years ago the hard case would have been North Korea; twenty years ago it would have been Pakistan. And ten years from now, if we continue on the current path, there will almost certainly be additional countries that will want to establish a nuclear-weapon option...and other countries that will want enrichment and reprocessing because their nuclear elites insist on it. And, as Geoff Rothwell noted, there are economic motives for countries to have fuel cycle facilities, and the profit motive is not always compatible with nonproliferation.

As a number of speakers have pointed out, internationalization has been on the agenda for a long time—INFCE began over 30 years ago, and the Baruch Plan was presented over 60 years ago. The establishment of a fuel bank, an international fuel cycle in Angarsk, the building of a black-box enrichment facility in the United States, the barriers to new entrants are all positive signs, but they do not represent a path to right side of the graph. But as things stand, we appear to be headed in the other direction, toward a much wider spread of fuel cycle facilities if nuclear power grows substantially.

As commentators of the U.S. presidential election often remark, when you are headed to defeat you need a game-changer. Matt Bunn mentioned a potential game-changer: the take-back of spent fuel. Spent-fuel take-back is so attractive that it would be a powerful incentive for

countries to voluntarily forego their own enrichment and reprocessing capability. You might not capture all the tough cases, but it would drive us pretty far to right side of the graph. The benefits of take-back are potentially large, the costs of take-back could be more than covered by reasonable fees, and the risks of take-back are trivial. In the 1970s we were too focused on the back end and didn't pay enough attention to the front end; today, I think we may be too focused on the front end. If nuclear power grows substantially, there will be a substantial increase in demand for enrichment. But very shortly following that will be the accumulation of large amounts of spent fuel and a search for solutions. We need to consider both the front and the back ends of the fuel cycle at the same time.

Nuclear disarmament is another potential game-changer. I think it is essential to place internationalization initiatives in a larger political context. Jim Goodby does an excellent job in his paper of providing this context: a desire to eliminate the two-tier system for both nuclear weapons and nuclear power, rather than establish a formal system of "haves" and "have-nots" for nuclear power.

The logic is compelling: if nuclear weapons are to be prohibited, enrichment and reprocessing must be brought under strict international control. As Mohammed El'Baradei noted, any country with enrichment and reprocessing is a virtual nuclear weapon state, able to produce or divert material for nuclear weapons in a matter of months. If the goal is nuclear disarmament, then I think it is as self-evident today as it was when the Acheson-Lillenthal Plan was developed that these activities must come under international control.

If internationalization is put in this context, it is difficult for me to imagine that many countries would stand in the way. Certainly not Canada or Australia. Would Argentina or South Africa put its inalienable right to enrichment above a global prohibition on nuclear weapons? I don't think so. And once these countries are on board, it becomes easier to isolate and deal with the really tough cases.

Of course, in order for this to work the NWS have to do more than simply reiterate their commitment to Article VI. They'd have to make clear that they really mean it, and they'd do that by having a concrete and ambitious work plan. This would include the steps outlined by the 2000 Review Conference (also by the four statesmen): CTBT, deep reductions, denuclearization, and establishing an official body to discuss a prohibition on nuclear weapons.

But the NWS should be clear from the outset that internationalization of sensitive fuel cycle facilities is a quid pro quo.

This linkage could be established through negotiations on a fissile material cutoff treaty. The 2000 NPT Review Conference mentions that an FMCT should take "into consideration both nuclear disarmament and nuclear non-proliferation objectives." As originally conceived, an FMCT would ban only the new production of HEU and Pu for weapons, and the ban would be verified primarily by bringing currently unsafeguarded enrichment and reprocessing facilities in NWS under safeguards. But the FMCT also provides an opportunity to establish a larger barrier to breakout, for both NWS and NNWS. These might include:

A requirement for advanced safeguards on all enrichment and reprocessing facilities

Establish the principle that IAEA inspectors would be drawn from only from countries that currently possess the technology

Establish standards for new enrichment and reprocessing facilities:

NPT in good standing + ratification of AP

Valid economic justification for the facility (according to IAEA)

Black box any technology transfer

Multinational ownership

No right of withdrawal using existing facilities

Entry into force when all countries with existing enrichment and reprocessing facilities have ratified the treaty

This may sound overly ambitious, but I think this is the sort of larger framework this is necessary in order to achieve real security benefits.

Yesterday, Matt Bunn said that “states aren’t going to sign away their right to have fuel cycle facilities.” But I think a many states might be willing to do this if it is necessary to facilitate real movement toward nuclear disarmament.