



Center for Nonproliferation Studies
Monterey Institute of International Studies
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The Future of U.S. International Nuclear Cooperation

**Testimony
of
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**Before
the
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Trade
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Thank you, Mr. Chairman, for the opportunity to testify this morning on the future of U.S. international nuclear cooperation.

U.S. nuclear cooperation activities are a crucial component of overall U.S. nonproliferation efforts and operate through many channels, including bilateral diplomacy, decisions on export licensing, the negotiation and implementation of U.S. nuclear trade agreements, and engagement in a variety of international forums.

These activities seek to advance several overarching – and sometimes competing – goals. Of greatest importance are strengthening international constraints on the proliferation of nuclear weapons, reinforcing relationships with friendly states, ensuring that U.S. nuclear exports are not misused, and promoting opportunities for the U.S. nuclear industry.

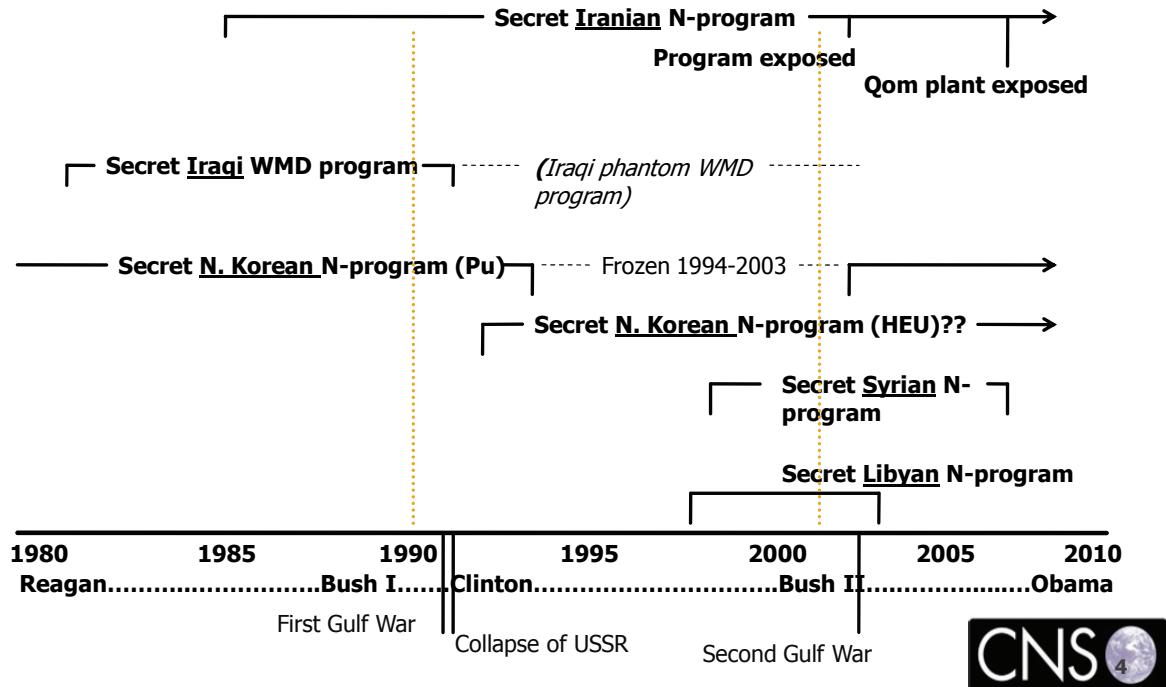
Although that nuclear industry is no longer dominant in the world, the United States remains the leader in shaping the rules of international nuclear trade because of its commanding global diplomatic presence, which derives from this country's broader economic and military power, and because of U.S. alliances and partnerships with a wide range of like-minded states. Our preeminent intelligence capabilities are also crucial in shaping international understanding of the need for strict rules of nuclear trade.

¹ The views expressed in this testimony are those of the witness and not necessarily those of the James Martin Center for Nonproliferation Studies or the Monterey Institute of International Studies or any of their sponsors.

As the Subcommittee is aware, the United States is deeply concerned over severe weaknesses in International Atomic Energy Agency (IAEA) safeguards – the inspection and accounting system the agency uses to confirm that nuclear materials subject to its monitoring are being solely for peaceful purposes – and over the potential spread of uranium enrichment and plutonium separation (reprocessing) capabilities, which can be used to produce nuclear-weapon usable materials. U.S. officials in this and the previous Administration have been working on a number of fronts to address both of these issues.

Let me take a moment to underscore the risks posed by the weaknesses of the IAEA system. The illustration below highlights the secret nuclear programs that have challenged the IAEA system in recent decades. The light vertical lines are intended to remind the reader that in 1990 three secret nuclear weapon efforts were under way simultaneously and that in 2001, there were four such programs under way.

Secret nuclear programs since 1982



Importantly, none of these programs was detected by the IAEA in its initial phase. All, it appears, were identified by U.S., Israeli, possibly South Korean, and/or British intelligence agencies.

Indeed, the empirical evidence of the weakness of the IAEA system is so strong that former IAEA Director General Mohammed ElBaradei has himself declared that the “classic” IAEA safeguards system is inadequate.

The remedy for this weakness – at least in part – is the Additional Protocol, the model set of strengthened safeguards authorities that the IAEA has asked its members to adopt as an amendment to their basic safeguards agreement with the agency.

The United States is pursuing a two-pronged strategy to gain wider acceptance of the protocol:

- It is seeking agreement within the 46-member Nuclear Suppliers Group to make the Additional Protocol a condition of supply; although some members, at the moment, are blocking a consensus in the group, most, if not all, nuclear power reactor vendor states have adopted this rule individually, on a de facto basis.
- Simultaneously, Washington is seeking this added nonproliferation measure in new U.S. agreements for cooperation, as seen in the recently approved U.S.-UAE agreement and as reported to be included in the U.S.-Jordan agreement, still in negotiation. And, Washington is urging individual states, to adopt this standard, irrespective of whether they have nuclear trade agreements with us. This “retail” approach seeks to make the Additional Protocol the new international standard, by slowly changing the “facts on the ground,” so that any state that fails to adopt this measure will be isolated and appear to be resisting the new norm of international nuclear transparency.

These strategies appear to be making gains, even among the states of the 118-member Non-Aligned Movement, which as a bloc resists measures that it sees as burdening the right to enjoy the benefits of peaceful nuclear technology. In practice, despite the official stance of the bloc as a whole, 60 percent of relevant NAM members have taken steps toward adopting the Additional Protocol.²

With regard to limiting the spread of enrichment and reprocessing, Washington is also pursuing multiple strategies. At the Suppliers Group, it is seeking standards that would permit the transfer of sensitive nuclear technologies only to states that met stringent objective criteria (including adoption of the Additional Protocol) and that also satisfied more subjective criteria concerning their likelihood of proliferating. As the group continues

² Excluding the DPRK, India, and Pakistan, since any Additional Protocol in their cases has only symbolic value, and also excluding non-state Palestine, as of January 2010, of the remaining 114 NAM states, 35 had the Additional Protocols in force, 24 had signed their Additional Protocols, and 9 had obtained IAEA Board of Governors approval of draft Additional Protocols. Indeed, Indonesia and South Africa, two leading NAM members, have Additional Protocols in force.

to debate the matter, moreover, Washington persuaded the other leading economic powers –the Group of Eight – to adopt these strict transfer rules on a provisional basis.

Separately, the Bush and Obama Administrations gained the acceptance of restraints on pursuit of these technologies by a number of individual states in the Middle East, obtaining a binding commitment by the UAE in its bilateral nuclear trade agreement that it would not develop them and signing Memoranda of Understanding with Bahrain, Jordan, Kuwait, and Saudi Arabia under which these states declared their intention to use international markets for nuclear fuel cycle services, rather than develop sensitive facilities indigenously. The United States is in negotiations with Jordan regarding an agreement for nuclear cooperation, where Washington hopes to include a formal UAE-style renunciation of enrichment and reprocessing.

Finally, the United States is seeking to discourage states from developing national enrichment and/or reprocessing by developing mechanisms to reassure states that they can obtain such services from external sources. International reserves of nuclear fuel – or “fuel banks” – that would be available reactor operators that were cut off by its traditional suppliers and multilateral fuel cycle facilities in which states could purchase an ownership stake are among the options that now gaining international support.

I have discussed these strategies at some length because they represent an alternative approach to legislation that may be under consideration that would make acceptance of the Additional Protocol and renunciation of enrichment and reprocessing requirements for new agreements for cooperation under section 123 of the Atomic Energy Act.

I helped to draft the current version of Section 123. At the time, there was considerable resistance by the Carter Administration to some of its provisions, including the then-new requirement that recipients of all U.S. nuclear goods accept IAEA inspections on all of their nuclear activities – so-called “full-scope safeguards.” The provision required the United States to

eventually terminate nuclear trade with India, Israel, and Pakistan. We also sought to make it very difficult for the United States to approve the reprocessing of U.S.-origin spent fuel under our existing and future agreements.

Both of these initiatives were very disruptive for various reasons, although over the years, they did help to build important international norms on these issues, even if imperfectly, in face of considerable initial international resistance to these changes.

The question for the Subcommittee is whether legislation strengthening Section 123 is the best approach today. At the moment, I believe the Executive Branch and the Congress are very much in tune on the substance: as I mentioned, both the Bush and Obama Administrations have pressed for the very goals that the legislation would enshrine. And significant progress is being made.

At the same time, as we will be observing unambiguously at the on-going nuclear Nonproliferation Treaty (NPT) Review Conference in New York, that highly publicized demands for emerging nuclear energy states to accept restraints on their nuclear affairs are very much a red flag. Such demands will unquestionably breed resistance not only to these new initiatives, themselves, but will also engender resentment that will carry over to other nuclear issues. This could make it more difficult for the United States to obtain consensus on Iran sanctions and other proliferation measures where international solidarity is essential.

The Subcommittee should also recognize that the Obama Administration in the UAE agreement has locked in the terms and conditions embedded in that document as the minimum requirements for subsequent agreements in the region. This is because of the provision specifying that if the United States does not obtain comparable arrangements in other regional accords, the UAE will have the right to alter the terms it has currently agreed to.

It is also worth underscoring that the Administration is seeking to gain acceptance of strict rules on the transfer of enrichment and reprocessing technology at the Nuclear Suppliers Group and is also seeking to amend group’s export control Guidelines to make recipients’ implementation of the Additional Protocol a condition of supply. If these efforts are successful, the need for legislation regarding these issues would be at least partially moot.

A further matter is whether Section 123 should be changed to require an affirmative vote by both Houses of Congress before an agreement for cooperation can enter into force. Here, I must say, my loyalty is divided, having worked both in the Senate and in the Executive Branch. It is fair to say, however, that the original arrangement of permitting a negative vote by either house to block an agreement – the “legislative veto” – gave more power to the Congress in this important area than it enjoys today. The legislative veto was deemed unconstitutional by the Supreme Court, so if the relationship between the Executive Branch and Congress in this area is to be rebalanced, an alternative approach will be needed.

One option might be to require an affirmative vote, using the *fast track* procedures in place for agreements that do not meet the basic requirements of Section 123, but on a *shorter timeline* – 30 days of continuous session for review and action rather than the current 60 days.³ This would give the Congress greater authority, but would also reduce delay, a trade-off that the Executive Branch and foreign parties to such agreements might not find unreasonable.

Let me turn very briefly to other Congressional actions of importance in this sphere, involving the oversight function rather than legislation. The Subcommittee is aware, I know, of the critical role that such oversight

³ This time frame is used in Section 123 (c) of the Atomic Energy Act for agreements not involving large-scale nuclear transfers, such as nuclear power reactors.

played in leading the Obama Administration to renegotiate certain aspects of the UAE agreement and to reinforce the importance of Dubai's toughening the administration of export controls. Even with the current arrangement for reviewing 123 agreements, the Congress had considerable leverage to obtain necessary changes in that document.

Oversight will be especially important in monitoring the implementation of existing U.S. agreements for cooperation, where the Administration must make decisions regarding whether to permit additional reprocessing of U.S.-origin used nuclear fuel. Japan, for example, is expected to seek authorization in the near future for the construction of a second large-scale reprocessing facility. The U.S. decision on this will not only affect Japan, however: If the Administration agrees to the second Japanese plant, it will be very difficult, indeed, for it to refuse South Korea permission to engage in a near-reprocessing technology for treatment of U.S.-origin spent fuel, known as pyro-processing, an issue that is already receiving attention as Washington and Seoul anticipate the renewal of the U.S.-South Korea agreement for cooperation in 2014. The result could be a Northeast Asia populated with actual and virtual nuclear weapon states, creating a potentially very dangerous environment in coming years.

A further area for Congressional attention is the current project by GE-Hitachi Global Laser Enrichment, LLC, to build a prototype laser uranium enrichment facility in Wilmington, North Carolina. The demonstration effect of the world's first commercial effort to enrich uranium by means of lasers is sure to encourage other nations to follow suit. Laser enrichment, once proven, will become virtually impossible to monitor in states of concern because it can be conducted on a scale sufficient to support a nuclear weapon program in very small and hard to detect facilities. The difficulties of detecting clandestine *centrifuge* uranium enrichment plants, such as the one built by Iran at Qom, or Syria's al-Kibar plutonium production reactor will pale in comparison to the challenge of finding undeclared laser enrichment facilities. This Subcommittee, in the exercise of its oversight authority, should demand an assessment of the proliferation

impact of construction of the GE plant, an assessment the Administration has to date refused to undertake.⁴

Additionally, as we press other states to refrain from building national enrichment and reprocessing facilities, we are building the former ourselves. We can mitigate the bad example of this activity, however. First, we can publicize that in the case of two of these facilities, the URENCO National Enrichment Facility, near Eunice, New Mexico, and Areva Eagle Rock enrichment plant, near Idaho Falls, Idaho, the United States will not receive the key technology needed to build the facilities' centrifuges. This so-called "black-box" approach, if adopted in other countries considering national enrichment plants, would be an important constraint against proliferation. Similarly, both of these facilities will be owned and operated by foreign corporations, a further measure that could be valuable as additional states consider building enrichment facilities on their territory. Finally, an important gesture demonstrating the importance of IAEA inspections and the commitment of the United States that enrichment facilities on its territory will be used only for peaceful purposes would place these facilities, and the USEC American Centrifuge Plant, in Piketon, Ohio, under IAEA safeguards. (The same might be done for the GE-Hitachi if it is completed and if this could be accomplished without compromising classified information.)

Finally, as was clear earlier in my testimony, U.S. diplomacy – and U.S. diplomats – are crucial to all facets of U.S. nonproliferation policy. This means that funding for their activities is equally crucial, and I hope that in the authorization process, this Subcommittee will help provide the necessary resources for this important work.

Thank you for your attention.

⁴ To be clear, the issue here is not the possible leakage of the technology being used in this facility, known as SILEX, but rather the international attention a successful laser enrichment facility of any type will generate and the encouragement it will provide for other states to pursue this technology. A number of states, including Iran, are known to have already pursued laser enrichment technology clandestinely, but apparently without success. A U.S. commercial laser facility will inevitably rekindle interest in this technology.