

# **Keeping U.S. International Nuclear Cooperation Peaceful**

Testimony of

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I would like to thank the Chairman, the Ranking member and the Committee for inviting me to testify today on the future of U.S. international civilian nuclear cooperation and how the United States might improve the nonproliferation aspects of such collaboration. It has been over three decades since Congress has reviewed U.S. policies and laws regarding U.S. international civilian nuclear cooperation. Your committee deserves praise for being the first to get back to conducting oversight on this important matter.

My basic message to you today is that Congress needs to enforce existing nonproliferation provisions in the Atomic Energy Act, add additional conditions, and instructs the Executive to get other governments to adopt similar nuclear restrictions. If congress fails to do so, it should count on reviewing an increasing number of highly controversial nuclear deals that will do less and less to slow the spread of nuclear weapons.

Several recent developments suggest why.

### **What's Ahead**

*First, as a result of our desire to reset our relations with Russia, the White House will soon be asking Congress to approve a nuclear cooperative agreement with Moscow.* Approval of such an agreement could have major nonproliferation implications. Russia has yet to endorse strong sanctions against Iran, it refuses to blend down any more of the many tons highly enriched weapons material it still has, and continues to assist Iran's advanced conventional military programs, nuclear activities, and its nuclear weapons-capable missile programs. Some critics have already accused the State Department of trying to use this agreement to bribe Moscow into helping the United States deal with Iran.

*Second, despite our best efforts last year to establish a new model of tougher nuclear nonproliferation conditions with the U.S.- United Arab Emirates (UAE) civilian nuclear cooperation deal, most Middle Eastern states are not buying.* Several Middle Eastern states have already refused U.S. requests to adopt similar conditions. More important, nearly all of the world's key nuclear suppliers – i.e., Russia, France, South Korea, Canada, and China - have already reached nuclear cooperative agreements that lack the UAE nonproliferation conditions with most of the countries in the region. France is now in discussions with Iraq about nuclear cooperation, again free of the UAE conditions of forswearing nuclear fuel making and adopting more intrusive nuclear inspections under the International Atomic Energy Agency's (IAEA) Additional Protocol. Meanwhile, Jordanian, Turkish and Egyptian officials have made it clear that they wish to retain the right to make nuclear fuel. Only Saudi Arabia (which helped bankroll Pakistan's weapons program) and Bahrain (which is politically unstable) have indicated a willingness to forgo exercising this right. All of this threatens to unravel the U.S. UAE nonproliferation initiative. In fact, under the terms of the U.S.-UAE nuclear cooperative deal, if the U.S. approves any nuclear cooperative agreement that has more favorable

terms for any other Middle Eastern state, the UAE has legal grounds to demand renegotiation of their own deal to secure similar terms.

*Third, with China's recent sale of power reactors to Pakistan, the Nuclear Suppliers Group (NSG) could soon become impotent in constraining civilian nuclear exports.* Earlier last month, we saw China announce its intention to sell Pakistan additional nuclear power reactors even though Pakistan is not a member of the Nuclear Nonproliferation Treaty (NPT). Under NSG rules, such a sale is prohibited. Coming on the heels of America's own efforts to encourage civilian nuclear exports to India (also an NPT nonmember), this sale's announcement puts the NSG's continued relevance in doubt. The NSG can choose to do nothing and slowly become irrelevant (it is unclear if China will seek NSG permission for the sale). Or it can attempt to detail the circumstances under which the NSG might approve nuclear exports to nuclear arming non NPT member such as Pakistan. In either case, the NSG would be hard pressed to say no to requests from other nuclear weapons armed non-NPT member states (e.g., Israel) or from any other state. In this regard, it is worth noting that Israel recently entered into discussions with France about importing a nuclear power reactor and both Israel and Pakistan have expressed an interest in securing nuclear cooperative agreements with the U.S.

*Fourth, as the U.S. increases its support for the commercial use of plutonium based nuclear fuels both here and abroad (e.g., Russia, India, and Japan) and attempts to expand America's share of the international uranium fuel market, the U.S. will be pressed by several states to renegotiate current agreements to allow them to do the same.* South Korea's nuclear cooperative agreement with the U.S. is up for renewal in 2014. Seoul already is pressing U.S. officials to amend the current agreement to allow South Korea to make their own plutonium-based fuels. Up until now, the United States has refused South Korea permission to recycle U.S. origin spent fuel because of South Korea's past covert attempts to make nuclear weapons with such materials and its undeclared experimentation in nuclear fuel making. Given the U.S. Department of Energy's interest in developing and cooperating with other states in new ways to recycle plutonium, though, it is quite possible that the Executive might honor South Korea's nuclear fuel making requests. If such an agreement is forwarded to the Hill, it could set a major precedent for other states that already have nuclear cooperative agreements with the United States who have a similar desire to work with nuclear weapons usable materials.

### **Congress Should Have a Vote**

Historically, Congress has rarely amended or blocked civilian nuclear cooperative agreements that the Executive has presented to it. Congress challenged the sale of reactor fuel to India proposed by President Jimmy Carter. It conditioned and so delayed the proposed agreement with China under President Reagan. Recently, it objected to the nuclear cooperative agreement with Russia and got President Bush to withdraw it from

consideration and called for and got the Bush and Obama administrations to renegotiate the nuclear cooperation deal with the UAE.

These Congressional interventions, though, were unusual. Under the Atomic Energy Act of 1954, civilian nuclear cooperative agreements automatically become law after 90 days of continuous legislative session unless Congressional majorities in both houses are able to pass a law rejecting or conditioning the deal. The President, of course, can veto any such legislation, which means that the legislative majorities objecting to or conditioning a nuclear cooperative agreement must be overwhelming for any Congressional condition or rejection to prevail.

This not only decreases Congress's incentive to object to proposed nuclear deals, it frequently discourages it from performing even minimal due diligence or oversight. Consider the recent nuclear cooperation agreement reached with Turkey. Turkey is a state that only recently was a major nuclear proliferation transshipment hub for controlled goods going to Iran. It currently has an ambiguous policy toward Iran's nuclear program and it once harbored desires to acquire nuclear weapons for itself. Yet, despite these points, Congress failed to hold even a single hearing regarding the U.S. nuclear deal.

This lack of Congressional oversight, meanwhile, has encouraged the Executive to become increasingly sloppy in how it implements its obligations under the Atomic Energy Act. With each nuclear cooperative agreement it submits to the Hill, the Executive is supposed to conduct a thorough nuclear proliferation assessment statement or NPAS. Yet, in the case of the controversial U.S.-Russia nuclear cooperative agreement the Bush Administration sent to Congress two years ago, the Government Accountability Office found that the NPAS was incomplete and rushed and that initially it was not even fully coordinated with the intelligence community.

A sure-fire remedy to these lapses would be for Congress to take back the authority it delegated more than a half century ago to the Executive to present nuclear cooperative agreements to the Hill not as treaties or laws, but as a type of fast-tracked executive agreement. This was done in 1954 when Congress passed the Atomic Energy Act. At the time, Congress's delegation of its power to regulate commerce seemed sensible. Eisenhower had just announced the Atoms for Peace Program and wanted to demonstrate America's willingness to share the "peaceful atom" with as many countries as quickly as possible to win a public relations effort against the Soviet Union.

Those days, though, have long since passed. Instead of extremely small zero power reactors of the sort Eisenhower offered in the 1950s, the United States is striking nuclear cooperation agreements to transfer 1,400 megawatt reactors capable of producing scores of bombs' worth of plutonium annually along with extensive nuclear training for hundreds of technicians. Also, after the nuclear inspections gaffes we have experienced with Iraq, Iran, Syria, Libya, Algeria, Taiwan, and South Korea, we now have a better idea of the inherent limits of nuclear "safeguards" than we did in the 1950s.

Certainly, if the number of countries operating nuclear power reactor doubles from 31 to roughly 60, the IAEA's ability to keep track of all the nuclear activities, materials and trained personnel that could be diverted to help make bombs is likely to decline. As it is, the IAEA already cannot detect covert fuel making and annually loses track of many bombs worth of bomb usable materials at declared nuclear fuel making plants. Also, the agency still cannot assure continuity of safeguards over spent and fresh reactor fuels at nearly two thirds of the sites it monitors today. Certainly, if Congress knew in the 1950s the magnitude of nuclear goods the U.S. might be trading in a half century later and under what level of inspections, it is doubtful that it would have been so quick to authorize U.S. nuclear cooperative agreements to be finalized without a Congressional vote.

That is why Congress needs to amend the Atomic Energy Act so that all future agreements require the approval of majorities in both houses. Some, of course, might object that this will require Congress to take on more work when it is already overloaded. The rejoinder is that doing due diligence at the front end is sure to save Congress and the country the embarrassment and danger of unanticipated U.S.-supported nuclear weapons proliferation tomorrow. Consider the case of Iran: Tehran's program was instigated and heavily supported with and by U.S. nuclear cooperation. Yet, when this critical cooperative agreement was first proposed, it never was seriously reviewed or put to a vote.

### **The Case for Enforcing Existing Laws**

Certainly if Congress required the Executive to seek majorities in both houses to finalize future nuclear cooperative agreements, Congress would be in a far better position to demand that the Executive follow what is sound and required under current law. In specific, three provisions of the Atomic Energy Act of 1954 as revised by the Nuclear Nonproliferation Act of 1978 deserve attention.

First, Congress should demand that the Executive do thorough nuclear proliferation assessment statements as required by law. As intimated by last year's Government Accountability Office's critique of the NPAS done for the U.S. – Russian civilian nuclear cooperative agreement, Congress should not allow the Executive to conduct these assessments in too narrow a fashion. Instead of asking if there is any evidence that the country being examined has clearly violated any specific nuclear laws or controls, the Executive should give a complete picture of what sorts of illicit and suspect nuclear, dual use, and nuclear capable missile technology cooperation or transfers the candidate state has made to states of proliferation concern. With the most controversial nuclear cooperation agreements, Congress should ask for a team b assessment to highlight possible additional concerns.

Second, Congress should demand that the executive technically clarify what the legal requirement is to provide "timely warning" of possible military diversions of exported U.S. nuclear technology. In response to an earlier written inquiry this committee made on this point, State Department officials under the Bush Administration wrote in

November of 2007 that “A key consideration of the U.S. Government, in this regard, is the need to ensure timely warning of diversion to non-peaceful purposes sufficient to permit an effective response.” The Nuclear Nonproliferation Act of 1978 also makes it clear that before the U.S. government can allow other states to recycle U.S. origin spent fuel to make plutonium, it must demonstrate that “timely warning” of any military diversion would be readily afforded. The requirement for timely warning in law and policy is certainly clear enough. What’s not, however, is precisely what “timely warning” technically requires.

One standard answer is that if International Atomic Energy Agency (IAEA) safeguards are applied to any nuclear activity or material, they automatically afford timely warning of a possible military diversion. The problem with this argument, though, is that it is far from clear if 1. the IAEA can meet its own timeliness detection goals for specific nuclear materials and activities and 2. the IAEA’s detection goals are tough enough in the first place. After several years of analysis of these matters by my own center and by the Congressionally mandated Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, there is considerable evidence that the answer to both these questions is no. Unfortunately, to date, no administration Democratic or Republican has bothered to do the detailed technical analysis required to address this question.

Your committee fully appreciates this. That’s why last year it voted to require the Executive to assess the IAEA’s ability to meet its own timely detection goals and to routinely report their findings to Congress. You included this requirement in Section 416 of the House Foreign Relations Authorization Act for Fiscal Years 2010 and 2011 (H.R. 2410), which passed the House but has not yet been taken up in the Senate. Certainly, if necessary, this language could be introduced as an amendment to the Atomic Energy Act.

Finally, the Nuclear Nonproliferation Act of 1978 has a provision, Title V that requires the U.S. to conduct nonnuclear energy cooperation and energy assessment assistance with developing states. To date, no Administration has yet chosen to implement this provision. This is a mistake. The reason why is simple: The current debate over what peaceful nuclear activities are protected by the NPT turns in no small part on how economically competitive the nuclear project in question might be against nonnuclear alternatives. Certainly, such economic analysis has been historically critical to how the NPT’s other pledges to share the peaceful benefits of nuclear energy are now read.

In specific, the NPT’s promise to share the “potential benefits of peaceful nuclear explosives” by affording turn key civil nuclear explosive services to developing states was never realized (or requested) for the most prosaic of reasons. After calculations were made as to how much it could cost to clean up the radiological mess left after using nuclear explosives to dig mines, canals, and the like, the “benefits” turned out to be negative. That the use of such explosives was virtually indistinguishable from nuclear testing also didn’t help. If a nuclear activity is uneconomic against nonnuclear alternatives and cannot be effectively safeguarded against being diverted because it is too

close already to being a nuclear weapon to provide timely warning of a military diversion, a pretty strong case can be made that it ought not to be protected by the NPT.

The Congressional Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism unanimously recommended that Title V of the Nuclear Nonproliferation Act of 1978 be implemented. Doing so would finally bring us back into compliance with existing law. It also would be a natural way to support the efforts of the United Nations to stand up a new International Renewable Energy Agency (IRENA). Again, this could be done without additional legislation (such as has been proposed by Congressman Jeff Fortenberry, H.R. 3774, and Senator Daniel Akaka, S. 1675) but could be legislated again if the current Administration is resistant to it.

### **Additional New Conditions**

In addition to getting the Executive to implement the requirements of existing law, Congress would do well to amend the Atomic Energy Act to address a number of additional concerns.

First, it would make sense to legislate the nonproliferation requirements that the United States has already imposed on the UAE for all non-nuclear weapons customers. No licenses for export should be approved until the recipient has ratified the Additional Protocol under an existing IAEA safeguards agreement. The recipient also needs clearly to foreswear making nuclear fuel or heavy water in domestic law. In addition, the United States should demand that such recipients allow the IAEA to conduct near-real time surveillance of all safeguarded nuclear sites so as to establish continuity of inspections over spent and fresh reactor fuel.

Second, questions have arisen concerning the Obama Administration's most recent agreement to let India reprocess U.S. origin spent fuel even if or after India chose to resume nuclear testing. Given these questions, it would be useful to make it clear that all U.S. civilian nuclear cooperation would cease, including intangible nuclear technology transfers and programmatic approvals for reprocessing if any state chose to resume nuclear testing. It also would be useful to make clear that the United States should only resume nuclear cooperation if the country in question either agreed to nuclear weapons reductions or dismantlement or gave up making nuclear fuel.

Third, the bipartisan Congressional Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism unanimously agreed that the United States should discourage the use of government backed financial incentives to promote civilian nuclear power. Yet, Presidents Bush and Putin pleaded in 2007 for international financial institutions (e.g., the World Bank and regional developmental banks) to afford subsidized financing to promote large nuclear energy projects. Legislation should make it clear that the U.S. delegates to any such banks should vote no to such proposals.

Also, there are fairly significant loopholes under the Atomic Energy Act that would allow the Secretary of Energy authority to approve transfers of nuclear reactor and other critical technology without the approval of Congress. Congress should close these loopholes legislatively.

Finally, there currently are moves to promote the use of plutonium based fuels both here and abroad. Perhaps the most significant is language in the proposed Kerry, Graham and Lieberman energy bill, Section 1104 that would establish that “It is the policy of the United States to recycle spent nuclear fuel to advance energy independence.” This committee should demand that this bill be referred to it for review since this language would effectively reverse the 1976-77 Ford – Carter policy to defer the use of plutonium based fuels in commercial reactors. Any such reversal would undermine the clear intent of the Nuclear Nonproliferation Act of 1978, which was to discourage further commercialization of plutonium based fuels. The economic, nonproliferation, and nuclear security case for the United States maintaining its own domestic moratorium on commercial plutonium recycling has only gotten stronger since 1976. Maintaining this moratorium was one of the unanimous recommendations of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism. Given the significant foreign policy implications of reversing U.S. policy, this committee, in particular, should review this case before any changes in law or policy are made.

### **U.S. Leadership**

It is fashionable to argue that the United States cannot be expected to do anything more in the nuclear restraint business than what other leading nations are willing to do. Yet, this was not the position the U.S. Congress took when it last passed the amendments to the Atomic Energy Act of 1978. Instead, Congress took the position that the United State should take the lead in establishing higher nonproliferation standards and get other states to follow. At the time there were at least as many nuclear supplier states as there are today.

Yet, after Congress amended the Atomic Energy Act in 1978, the Nuclear Suppliers Group actually adopted controls over the very same dual use nuclear goods the United States added to its control lists. The NSG also refused to export to nonnuclear weapons states that did not place all of their declared nuclear facilities under international safeguards. Finally, commercial reprocessing ended in Germany and plans for such activities were dropped in South Korea, Pakistan, Iran, Belgium and several other states. In short, America led and a good deal of nuclear restraint was achieved.

Today, the world today is no different on this score than it was thirty years ago. Key nuclear supplier states still have reasons to care about what the United States thinks. Consider the case of France. France is quite keen on doing business in the United States. Although the French have lost several billions of dollars in the effort to build a reactor for

Finland and lost billions of dollars more on the contract it assumed it would secure to build reactors for the UAE, it hopes to make up these losses by selling nuclear plants in the United States. The first of these prospective sales is a 2.7 billion dollar mixed oxide fuel fabrication plant that is being paid for with U.S. taxpayers' money to help dispose of 43 tons of surplus military plutonium. The French have the contract. Then there are the power reactors (at least six) that France wants to build in the United States. Each of these will cost between four and seven billion dollars to construct. Most require subsidized federal loan guarantees, which will save the operator at least 13 billion dollars per reactor over 30 years. Finally, the French are seeking licenses for all of these plants and additional U.S. loan guarantees to complete a planned 2 billion dollar uranium enrichment facility in Idaho. The French claim that they have already secured nearly 4 billion dollars in prospective enrichment contracts for this plant.

All of this suggests why France has reason to listen to reasonable nuclear requests from Washington. Assuming France does the right thing and supports the conditions that the United States imposes on itself, count on the Germans and the United Kingdom following in kind to maintain European Union harmony. Russia, which is interested in securing German assistance in perfecting its power reactors, in turn, could find its own reactor exports operating under German export control provisions. Presumably, South Korea and Japan could be persuaded to follow these examples, leaving China in the unenviable position of being the odd man out.

None of this is inevitable but it is more than merely plausible. More important, the alternative future if the United States does not lead is more proliferation of more dangerous nuclear technology to more states. This is something the United States and Congress should do all it can to prevent. The place to begin is with the law and U.S. nuclear nonproliferation policy.