

**“SAVING THE NUCLEAR NON-PROLIFERATION
TREATY AND THE NONPROLIFERATION REGIME
IN AN ERA OF NUCLEAR RENAISSANCE”**

**HEARING OF THE TERRORISM, NONPROLIFERATION AND
TRADE SUBCOMMITTEE OF THE HOUSE FOREIGN AFFAIRS
COMMITTEE**

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REP. SHERMAN: If people could come in quickly and take their seats, we're starting this hearing a -- almost 30 minutes late.

As most of you know, we just finished a markup in the full committee, which was also held in this room. And that's why we're starting this hearing late.

I recognize myself for an opening statement, followed by our ranking member, Mr. Royce, and such other members of the subcommittee as will wish to make opening statements.

It is possible that we are on the verge of a global renaissance in the nuclear power industry. Several countries, including the United States, are reconsidering nuclear power, due in part to concerns about global climate and in part due to the high price of fossil fuels.

Increased power consumption by big developing countries such as China, as Russia, seems to ensure even higher prices for fossil fuel and increased emissions in the future. Nuclear power is viewed by many, including the current Bush administration, as a big part of the solution of both of these problems.

Other countries are planning to develop nuclear power for the first time as a result of these twin problems. With the development of civilian nuclear power, a country receives know-how, equipment and technology that could conceivably serve a military program. Civilian nuclear power programs can also serve as a cover for a military program. Moreover, as nuclear technology becomes more widespread, the chance that nuclear materials will fall into the wrong hands increases.

The Non-Proliferation Treaty, the NPT, and the nuclear nonproliferation regime is already under stress. The Iranian and North Korean weapons programs have caused insecurity about the durability of the nonproliferation regime.

In addition to Iran, there are other energy-rich countries in the Middle East that have begun thinking about and talking about ostensibly non-weapons nuclear programs to generate electrical power and for desalination. But it appears that these countries may be acting as a hedge against the nuclear weapons program of Iran.

Given the very small punishments that have been meted out to North Korea and the even smaller punishments meted out to Iran, perhaps these states and others have little to fear from exploring the possibility of developing their own nuclear weapons.

There is a significant and new and renewed interest in nuclear power. Whether this leads to an actual and massive expansion of civilian nuclear power remains to be seen. What is clear now, however, is that the nonproliferation regime in its current configuration is not ready for this so-called possible nuclear renaissance. In fact, it's treading water as it is.

The new U.S. administration as well as the next Congress will be confronted with these challenges immediately at the beginning of next year. Arcane matters concerning the interpretation of a 40-year old treaty and the technical capacity of the International Atomic Energy Commission (sic/Agency), the IAEA, will be critical to our national security.

Indeed, the issues we address today will, I believe, have a far greater impact on our national security than will the outcome of the war in Iraq.

Among the questions we will examine today are these: Are the current International Atomic Energy Agency resources sufficient to get the job done? Does the IAEA have the money, staff and equipment it needs to ensure compliance? If not, how should additional resources be acquired? Should member states be called upon to pay higher dues? Or should countries have to bear the costs of their own safeguards?

Does every state have the right to develop the full fuel cycle? Phrased another way, has the United States acquiesced in a massive misinterpretation of the NPT? Is it not Article 4's peaceful use right -- is that right qualified or not? And does it allow a country to get right to the edge of having a nuclear weapon while claiming that it is pursuing only a peaceful program?

What are the best options for providing states with a guaranteed fuel supply? How should the international community deal with spent fuel and nuclear waste? Should reprocessing be part of the solution? Or is that too dangerous, costly, and ultimately unnecessary?

On the subject of reprocessing, should the next administration discontinue or significantly modify the Global Nuclear Energy Partnership started by our current president, which has advocated a purported proliferation resistance means of reprocessing? Should our government be in the business of advancing nuclear power internationally in the first place?

What are the steps necessary to ensure physical security of nuclear facilities? What are the steps necessary to improve international control on the transfer of nuclear technology to prevent it from falling into the hands of proliferators and terrorists? How should international law enforcement agencies and intelligence agencies cooperate?

Finally, and I believe, most importantly, we need to address the punishments that are imposed on those states that violate the NPT or violate the safeguards agreements that country has entered into with the IAEA.

Six years have gone by since the initial revelations about Iran's then-covert enrichment program, clearly illegal enrichment program. Iran has still suffered only the lightest sanctions at the multilateral level, clearly insufficient to cause them to change their course with regard to developing nuclear weapons.

It was not until February 2006 that Iran's file was finally referred to the U.N. Security Council in the first place, an action that should have been virtually automatic once it became known that Iran was building an enrichment plant back in the summer of 2002.

If we continue to allow Iran to violate its commitments to the NPT or allow other states to follow its path unpunished, the treaty may be a dead letter, and discussions of its details may be irrelevant.

The nonproliferation regime that has held back nuclear anarchy is under grave stress. And if Iran is able to violate it repeatedly and without significant punishment, it may be a dead letter.

I want to thank our distinguished witnesses for being here today. And I look forward to their testimony. But first, I look forward to the opening statement of our ranking member, Mr. Royce, from California.

REP. EDWARD R. ROYCE (R-CA): Thank you very, very much, Chairman. I appreciate you holding this hearing. And when I chaired this subcommittee, we closely examined the Non-

Proliferation Treaty. We had good hearings. And I expect today's hearing is going to be as productive.

And there are few challenges, frankly, as important as checking nuclear weapons proliferation. And unfortunately, as you all know, and especially as our expert witnesses here know, the task of doing that is getting more difficult day by day.

Nuclear energy production worldwide likely will rise as overall energy demand rises. And our nation should be expanding its nuclear energy capacity as part of our diversified energy strategy.

But I wish I felt as positive about expanding nuclear energy abroad. I am not enthusiastic about 40 countries expressing interest in starting nuclear power programs. And that's the number the IAEA reports. Included in those countries are Nigeria and Egypt and Morocco.

You know, the line between civilian and military use of nuclear technology isn't sharp. Consider that A.Q. Khan got his start at a European organization dedicated to the civilian use of nuclear energy, and then of course went on to put together a nuclear arms bazaar, which was used not only to give this technology for a nuclear weapon to Pakistan but also to Libya and North Korea and other countries.

So with a civilian nuclear power program, a country possesses a technological and knowledge infrastructure that could be translated into a military program, as India and as Pakistan and as North Korea did. And that possibility is why several of Iran's neighbors are looking to begin nuclear energy programs.

Other concerns with the proliferation of nuclear energy are political instability and issues of physical security in an age of terrorism.

Nuclear energy, nevertheless, has momentum. After all, the International Atomic Energy Agency, while charged with guarding against nuclear technology spilling over from civilian to military use, has as its twin mission promoting nuclear technology for energy generation.

The administration is pushing nuclear energy abroad. France, Canada and other countries are looking to maximize their nuclear export potential. At least Congress is starting to give critical attention to the nuclear technology sharing agreements between the U.S. and other nations, the 123 agreements.

That we can't get the world to agree that no more countries should develop full nuclear fuel cycle capabilities very much increases the proliferation risk. That is, we haven't defeated the erroneous and corrosive interpretation of Article 4 of the NPT treaty. As the chairman said, this is a massive misinterpretation of the treaty.

You know, if we could void this so-called right to enrich or reprocess nuclear material, we would go a long way. This was a -- this so-called right was never envisioned in the original treaty. I have a letter that we sent, myself and others, to our secretary of State as members of Congress explaining that point and saying that we believe that the importance of this subject requires that its consideration be made a prominent element in the preparatory process now underway regarding the 2010 NPT review conference.

A practical step to reduce the profusion of fuel cycle technology would be an international supply agreement. This might also chip away at the so-called right. And we'd better act quickly. The

IAEA also reports that nearly a dozen new countries want to produce nuclear fuel. That portends a disaster.

The NPT will become worse than useless if it sanctions this development. The IAEA's inspection capabilities should be bolstered to deter military use of nuclear technology. Though flawed and weak, the IAEA did turn up the heat on Iran this May with a report that Tehran was stonewalling its inspectors. Any nuclear renaissance shouldn't be allowed to overwhelm the IAEA's limited resources.

Progress on these fronts will be difficult. Strengthening the international nonproliferation regime is not a political priority, unfortunately, at home or abroad. It should be. That the administration mailed in at the last NPT review conference, that they mailed that in is puzzling to me, to say the least. The fact that the NPT is built upon a near-utopian expectation that all nuclear weapons will be eliminated challenges its utility, I think. And much of the world appears unconcerned by proliferation, as evidenced by its indifference to Iran's march toward nuclear weapon capability.

And maybe this will change. But it's getting late.

As frustrating as winning international support is, the NPT, if properly interpreted, embodies a key norm for confronting would-be proliferators in an era of expanding nuclear energy. It should be useful against Iran. Gaining that advantage, however, would require a great deal of diplomatic work against long odds. And clearly, the next administration has its work cut out if the NPT is to remain relevant.

Thank you again, Mr. Chairman.

REP. SHERMAN: Thank you, Mr. Royce.

I'll now recognize for a brief opening statement the vice chair of the committee.

REP. DAVID SCOTT (D-GA): Thank you very much, Mr. Chairman. I think that this subject matter of this hearing today is certainly most profound for the future of the planet.

On the bleached bones of many great past civilizations are written those prophetic words, "too late." "They moved too late to deal with that crisis." And today, as we look at it, it's gone beyond just Russia, France, Great Britain, the United States -- that's the big five. Now you've got Pakistan. We've got India. We've got North Korea, who exploded a device a couple years ago. And then there's Iran, and it just continues to escalate.

Then we've got the discovery of the nuclear black market network that's run by A.Q. Khan that has certainly entered the debate of extreme worrisome (sic) with this nuclear issue.

In the post-Cold (sic) world, the nuclear threat has certainly evolved from that of a worry of Russia, the United States meeting and attempting to annihilate one another. ICBMs were at one point dreamed of raining down on American cities. And I call to mind the movie, the "War Games," where Matthew Broderick was rushing in to save the day.

Instead, the threat has become one of loose nukes and dirty bombs and technology transfers from one rogue regime to another, possibly to terrorists. And as such, it is only fitting that we examine whether or not our old strategies for dealing with the old threats are appropriate for dealing with what the threat has now become.

Principally, as Chairman Sherman has stated and the subject of this hearing details, is the NPT still relevant? Will we see a rash of countries simply ignoring their NPT obligations or withdrawing outright? These, to me, are the two most profound questions.

A few minutes ago, or a couple hours ago, in this very room, we marked up legislation for the implementation of a civilian nuclear cooperation agreement with Russia. Part of the reason for striking this deal was to stave off Russia's continued assistance to the Iranians in their quest for nuclear power and to put us in the perplexing position: Is it for energy or is it for war?

We have also considered in the past and will consider again, presumably, a similar agreement with India. So it would seem that these sorts of bilateral agreements are the logical next step in working with nations who wish to reap the benefits of civilian nuclear power. However, they are not without their problems.

We've already seen that even the possibility of working with the U.S. on nuclear energy has led the Indian government to the brink of collapse because of their new left and may touch off a new arms race with its neighbor Pakistan. This is a very worrisome predicament.

So it seems there is a great deal of uncertainty about what comes next in the battle to prevent proliferation of nuclear weapons. And there are certain many theories as to what can and should be done to allow nations to develop environmentally friendly nuclear energy without worrying about nuclear material being turned into weapons.

In fact, the distinguished gentleman from my own state of Georgia, my good and dear friend former Senator Sam Nunn, seems to think that the U.S. needs to work more diligently towards our own disarmament obligations in order to set the example and prop other nations to do more. Therein lies a soul-searching challenge to each of us in the United States.

However, unilateral disarmament may simply leave the United States more vulnerable to attack. So I would be interested in hearing what the panel thinks about these issues, these perplexing and challenging questions that I have raised, and any other thoughts they may have on the subject.

And I certainly want to thank the chairman for hosting this most challenging and timely and extraordinarily important subject for the future of the world.

REP. SHERMAN: Do we have other opening statements? Okay. Let's move straight to our witnesses, then.

We have with us four distinguished witnesses. We've been asked -- we've asked them to prepare opening statements of not more than eight minutes, given the fact that we've started late. We will hold them to that. And if you want to be thought of as particularly knowledgeable and credible by our committee, you'll cut your opening statement to six minutes. And then we will give your comments so much more weight.

We have four witnesses, as I said. The first is Dr. Graham Allison, director of the Belfer Center for Science and International Affairs at the Kennedy School of Government at Harvard University. Dr. Allison served as the assistant secretary of Defense for policy and plans under the Clinton administration. Dr. Allison has been a leading analyst of U.S. national security and defense policy for the last 30 years.

Next, I'll welcome Dr. Pierre Goldschmidt, a senior associate at the Carnegie Endowment for International Peace and a scientific fellow at the University of Brussels. Dr. Goldschmidt has also served as deputy director general and head of the Department of Safeguards at the IAEA.

I'll also welcome Mr. Orde Kittrie, professor at the Sandra Day O'Connor College of Law at Arizona State University. Mr. Kittrie is a visiting professor at the Paul Nitze School of Advanced International Studies at Johns Hopkins, and a leading expert on nuclear proliferation legal issues and sanctions.

And finally, we have Mr. Jack Spear (sic/Spencer), a research fellow at the Roe Institute for Economic Policy Studies at the Heritage Foundation. Mr. Spencer works on domestic and international nuclear energy issues relating to security and defense.

Dr. Allison.

MR. ALLISON: (Off mike.)

REP. SHERMAN: They'll press the button for you.

MR. ALLISON: Okay. Sorry. Apologies.

Thank you very much, Chairman Sherman and Congressman Royce and members of the committee. It's a great honor for me to appear before you today.

And I applaud the committee's or the subcommittee's decision to drill down on these issues. And I like all the introductory comments that I heard.

I want to submit for the record a recent report of an independent commission of imminent persons, so-called, by the -- that was done for the IAEA and for the director, Mohamed ElBaradei, of which I served as executive director. It's entitled, "Reinforcing the Global Nuclear Order: The Role of the IAEA." This was just --

REP. SHERMAN: Without objection, it'll be made part of the record.

MR. ALLISON: Thank you.

But I -- for the testimony, I'm only speaking for myself, not for the commission or for any other organization I'm associated with. 22:44

The questions raised in your very thoughtful letter inviting us to testify are extremely complex. And so I'm going to start from sort of 30,000 feet with four big truths, as I see it, and then drill down quickly.

The four truths are, first, nuclear terrorism; secondly, present at the unraveling; third, the risks of the nuclear renaissance; fourth, strengthening the IAEA and securing the nonproliferation regime.

As one tries to think about the complexities of this issue -- and Mr. Scott's already mentioned Sam Nunn, with whom I agree 100 percent on these set of issues -- a way to resolve the complexities, I believe, is to think about them through the lens of a single nuclear bomb exploding in a single city. And in a book that I published in 2004, a couple of copies of which

I've brought, "Nuclear Terrorism: The Ultimate Preventable Catastrophe," in conjunction with it, we put up a website called NuclearTerrorism.org, where you can put in your own zip code and see what the small nuclear bomb that was thought to be in New York city a month after 9/11 would do.

I think if you think about that as the bottom line, asking questions about the NPT or the IAEA or the nuclear renaissance is asking the question, how do they impact this possibility? That's not the only topic, but I think that's a valuable bottom line for reminding people why this matters so much, as the opening statements have already said.

Secondly, "present at the unraveling": If you want a wonderful read for the summer during vacation, if you have any spare time, I would recommend Dean Acheson's book, which is the story of the construction of the global order that brought us the longest period of peace and prosperity human beings have ever enjoyed. That is, the post-World War II exercise, which was a bipartisan undertaking under Truman and Vandenberg and the others. He calls the book, "Present at the Creation," though I think he might have, writing today, talk about present at the unraveling, the potential unraveling of the nonproliferation regime, which has held back the tide of a cascade of proliferation.

And I agree very much, as I say in the written testimony, with the U.N. high level panel of 2005, of which Brent Scowcroft was the American participant, which warned that the regime at that point was, quote, "eroding to the point that risked irreversibility," so, eroding to the point of irreversibility beyond which there would be a cascade of proliferation.

Thirdly, risks in the nuclear renaissance. They were writing in 2005. Today, it's much clearer that the combination of the demand for energy and rising consciousness about the climate consequences of burning oil and gas are propelling a growth of nuclear power.

One sees 36 nuclear power plants under construction today, 50 percent more than you would have seen at a rate 10 years ago.

This entails some risk of states getting nuclear weapons, as the members of the panel have said. The risk comes not from a new nuclear civilian energy plant, not from a new civilian energy plant, but from the fuel cycle that's associated with it.

So I think as has been said, the prevailing interpretation by the chairman of the NPT, which purports to provide right and opportunity for states that acquire a nuclear energy plant to also produce fuel for that plant or to reprocess spent fuel from that plant is a mistake and needs to be reinterpreted. And it needs to be reinterpreted in such a way that there can be a consensus about it.

So if states who get nuclear energy plants also can build enrichment plants like Iran today, or reprocessing facilities like North Korea, this will certainly provide cover for what will be a spread of nuclear weapons and risk to the whole nuclear renaissance.

Finally, strengthening the IAEA: In this commission report, we have a number of suggestions about the ways in which the IAEA needs to be strengthened in reinforced nonproliferation regime. Unless the current standards and practices for nonproliferation, security and safety are significantly strengthened, the current trend line is going to abort this nuclear renaissance, but it's also going to lead to catastrophic attacks on countries like us.

So the IAEA has a language for this. They call it safeguards, which really means no diversion to or accounting for non-diversion to military use, safety and security. In each of these areas, the commission made specific recommendations about the ways in which the standards and the enforcement of the standards should be reinforced and the budgetary consequences of that in terms of contributions.

So specifically, strengthening safeguards: The commission calls for an additional protocol, plus. And Pierre Goldschmidt has a lot to say about what the "plus" would look like.

And secondly, stringent global nuclear security standards: U.N. Security Council (Resolution) 1540 calls for effective appropriate standards. We need to define that as a global gold standard that needs to be enforceable. And there's details about that in the testimony.

Finally, new steps to control the fuel cycle: I think as, again, two of you mentioned in your opening statements, we need to think about an assured nuclear fuel cycle so that the argument that's made by somebody like Iran that says, "We need to make our own fuel because otherwise we're not sure that we'll have access to fuel," that should be exposed as basically a fig leaf behind which Iran is seeking nuclear weapons. And I think an assured nuclear fuel system of the sort that's been proposed by the IAEA and is under discussion, including the fuel bank of last resort for which Congress has appropriated \$50 million to match the 50 million bucks from Buffett, is one significant part of that.

So thank you very much, Mr. Chair.

REP. SHERMAN: Thank you.

Dr. Goldschmidt.

MR. GOLDSCHMIDT: Thank you, Mr. Chairman, and members of the committee, for the invitation to testify today. I would like to submit my prepared written testimony for the record and will summarize some specific points from that testimony.

As you know, the main actors that have a key role to play in order to strengthen the nonproliferation regime are the IAEA, the U.N. Security Council, the Nuclear Suppliers Group, the P-5 and, of course, member states of these organizations.

I will briefly mention only some of the very practical and concrete measures they should, I believe, adopt as a matter of priority. And let me start with the IAEA.

First and most important is the need for the IAEA Board of Governors to formally acknowledge that the compliance failures and breaches committed by the Republic of Korea and Egypt which were reported to the board of governors in November of 2004 and February of 2005 respectively were cases of noncompliance, which should have been reported to the Security Council, as foreseen under the IAEA statute.

The Board of Governors should therefore adopt a resolution requesting the director general to transmit all reports concerning those two states to the Security Council. Such reporting would be for information purpose only. But it is essential that the failures and breaches committed by those two countries be unequivocally recognized to constitute noncompliance with the comprehensive safeguards agreements.

Failure to adopt such a resolution would result in a dangerous precedent, lowering the standards for compliance with the comprehensive safeguards agreement and thereby seriously undermining the credibility of the safeguards regime.

And second, the draft India-specific safeguards agreements submitted on 9 July this year for the board's approval should, for a number of reasons, be amended before it is approved by the board.

I'll address just one of those reasons. Others are mentioned in my written testimony.

The biggest problem and loophole in the agreement is that this is the first time that the implementation of a safeguards agreement depends on purely commercial conditions which can't in any event be verified by the agency. It is setting a very bad precedent.

The preamble to the safeguards agreement should therefore either be substantially redrafted or eliminated. If it is not, and if India at one point in time considers that appropriate fuel supply conditions are not or are no longer met, India could refuse to accept the agency safeguards and withdraw from the agreement.

It is doubtful that this meets the Hyde Act requirement of IAEA safeguards in perpetuity.

Mr. Chairman, what can the U.N. Security Council do to reinforce the nonproliferation regime? Experience has demonstrated that when a state is found to have been in noncompliance with its safeguards agreement, does not show full transparency and does not proactively cooperate in resolving questions or inconsistencies with regard to its nuclear program, the agency will temporarily need expanded verification authority.

To give the IAEA the verification tools it needs in case of noncompliance, the Security Council should adopt a generic, i.e. not state-specific, resolution stating independently of any specific case that if a state is found by the IAEA to be noncompliant with its safeguards agreement, upon request by the agency, the Security Council would automatically adopt a specific resolution under Chapter 7 of the UN Charter requiring that state to temporarily grant to the agency expanded access rights.

A draft of such Security Council generic resolution is provided in Annex 1 of my written testimony.

Similarly, the Security Council should urgently adopt another generic resolution under Chapter 7 in order to deal preventively with the case of a non-compliant state notifying its withdrawal from the NPT as North Korea did in 2003.

Mr. Chairman, the Nuclear Suppliers Group also has a key role to play. The NSG should reject what are arbitrary, India-specific export guidelines and instead adopt objective criteria-based export conditions that would allow all non-NPT states the right to acquire nuclear power plants while at the same time reinforcing the global nonproliferation regime. A concrete proposal can be found in Annex 2 of my written testimony.

And this brings us, finally, to the disarmament issue and the role of the P-5. In my opinion, disarmament, as well as a stronger non-proliferation regime, is a prerequisite for an orderly and secure expansion of nuclear energy. It is, of course, very important to publicly support the vision of a world free of nuclear weapons. But progress toward that goal will be judged on the practical

and concrete steps taken and not just on the rhetorical statements made by nuclear weapons states.

The P-5 needs to agree now on the concrete disarmament steps that constitute a priority and can be achieved before the 2010 NPT review conference. If one had to select only three issues for the nuclear weapons states to agree upon, in my view, those issues should be, first, ratifying the Comprehensive Test Ban Treaty; second, agreeing on a Fissile Material Cutoff Treaty, FMCT, while simultaneously implementing the trilateral initiative between the U.S., Russia and the IAEA; and last, but not least, concretely de-emphasizing the value of nuclear weapons.

Thank you, Mr. Chairman.

REP. SHERMAN: Thank you.

Now let's hear from Mr. Kittrie.

MR. KITTRIE: Chairman Sherman, Ranking Member Royce, distinguished members of the subcommittee, thank you for the opportunity to speak with you today about this important topic.

Forty years ago this month, the U.S. joined 61 other nations in signing the Nuclear Non-Proliferation Treaty, the NPT. During its first 25 years, the NPT played a central role as nuclear nonproliferation efforts met with remarkable success. The last dozen years have been less successful for the nuclear nonproliferation regime. India, Pakistan, North Korea, Iran and A.Q. Khan all flouted the nuclear nonproliferation regime in various ways, and none were seriously sanctioned.

In the last two and a half years, at least 13 countries in the Middle East have announced new or revived plans to pursue or explore nuclear power programs. In most of these countries, as has been mentioned, nuclear power programs make no economic sense but seem instead to be a response to Iran's nuclear program.

What has caused this dangerous decline of the nuclear nonproliferation regime, and what can be done to save it? The primary reasons, in my view, for the regime's decline include a lack of political will to effectively sanction proliferators, IAEA verification monitoring authorities that are too weak to promptly and reliably catch proliferators, the increased availability of nuclear weapon and associated technology and a sense that the nuclear weapons states, and particularly the U.S. and Russia, have not lived up to their side of the NPT bargain, their disarmament commitments.

I'll briefly go through these reasons for the decline and suggest what Congress can do about them.

First, the international community must do a fairer, better job of sanctioning proliferators. International laws violated with impunity soon cease to exist.

The rapid advance of Iran's nuclear program in clear violation of international law is by far and away the number one threat to the vitality of the nuclear nonproliferation regime. And Iranian nuclear arsenal, should it be achieved, seems likely to unleash a cascade of proliferation across the Middle East. Such a cascade in the Middle East would likely lead to the worldwide collapse of the already tottering nuclear nonproliferation regime.

In addition, the proliferation of nuclear weapons in the Middle East tinderbox seems likely to result in only one thing, and that is nuclear war.

Unfortunately, the international community has thus far responded with remarkable passivity to the grave dangers posed by the Iranian nuclear program. For example, the sanctions imposed on Iran by the international community thus far are much weaker than the sanctions which stopped the Iraqi and Libyan nuclear weapons programs.

There are several steps that Congress can take to help convince Iran's leadership that the price for its nuclear program has become too high, that the risk from sanctions to the regime's survival has become so great that the regime is better served by halting its nuclear program. These include passage of legislation such as that currently pending that would, one, tighten U.S. federal sanctions against Iran and, two, encourage other countries and businesses to tighten their sanctions against Iran, including by expanding the Iran Sanctions Act, as H.R. 2880 would expand it, to apply to foreign companies that provide Iran with the refined petroleum on which its economy depends. The second major step we must take if we were to save the nonproliferation regime is to strengthen the IAEA's verification and monitoring authorities. The verification shortcomings of its basic safeguards agreement prompted the IAEA to issue an additional protocol which expands the IAEA's access rights.

The IAEA did not, however, make adherence to the additional protocol mandatory for NPT members. And some two-thirds of the 189 NPT member states, including many states of proliferation concern, have yet to adhere to the additional protocol.

I recommend that Congress consider amending U.S. law to require that U.S. nuclear exports to NPT member states be based on the willingness of such states to adopt the additional protocol.

Congress should also declare its support for the Nuclear Suppliers Group, of which the U.S. is a member, prohibiting exports to NPT members that do not adhere to the additional protocol.

In addition, Congress should require that the executive branch finish as soon as possible the steps it must take to complete the U.S.'s own long-delayed ratification of the additional protocol.

Turn now, briefly, to minimizing the proliferation risk of increased availability of nuclear materials and technology. Key to this is the Cooperative Threat Reduction Program initiated by Congress in the Nunn-Lugar legislation, which has been a great success in securing nuclear materials. I list in my written statement several things Congress could do in order to facilitate the strengthening and expansion of the CTR program.

In addition, there are several important steps Congress can take to help minimize the risk from increased availability of civilian nuclear materials and technology. For example, Congress should continue its support for an IAEA fuel bank that would be used to provide fuel assemblies to any country that is denied fuel delivery for purely political reasons and has chosen not to engage in its own enrichment or reprocessing.

Congress should also support the phase-out of civilian use of HEU, both overseas and here in the United States, including by phasing out U.S. exports of HEU, which unfortunately still continue.

Finally, many non-nuclear weapons states have long accused the NPT nuclear weapons states, and particularly the United States, of not acting in good faith to make progress towards nuclear

disarmament. While it seems unlikely that this perception of U.S. failure to hold up its end of the NPT bargain has directly contributed to any country proliferating, the perception of a lack of U.S. commitment to disarmament has clearly made it harder for the U.S. to gain support in international fora for its efforts to isolate proliferators.

The following are specific steps that Congress could take to increase the perception and enhance the reality of U.S. movement towards the goal of nuclear disarmament.

One, Congress should work with the next president to ratify the CTBT. Two, Congress should encourage the executive branch to energetically pursue a fissile material control treaty. Three, Congress should urge the president to extend the START treaty's monitoring and verification provisions before the treaty expires next year.

In conclusion, the nuclear nonproliferation regime as it exists now has little remaining capacity to detect or to deter violations. An NPT member state currently considering whether to develop nuclear weapons can only conclude that the IAEA's verification and monitoring authorities are too weak to promptly and reliably catch a cheating hand. Even if it is caught, it will receive light sanctions at worst.

The nuclear nonproliferation regime is at a tipping point, with its viability in the balance. If a nuclear 9/11 or a series of them some day occurs, it will be because the international community failed to enforce and repair the nuclear nonproliferation regime while it still could.

The time to act is now. Humanity's future may depend on it.

Thank you.

REP. SHERMAN: Thank you.

Mr. Spear (sic) -- Spencer, excuse me.

MR. SPENCER: Thank you.

Mr. Chairman and members of the committee, thank you for inviting me to testify before you today on this critical issue.

While the nonproliferation regime is clearly under stress, it is not broken. That being said, there is no question that a global nuclear renaissance will present new and unique challenges. But if met appropriately, I believe that a global nuclear renaissance is not incompatible with nonproliferation objectives.

The challenge for the United States will be to integrate its principles into a new rule set that governs peaceful nuclear commerce. The following recommendations can help meet this challenge.

First, the U.S. must take a lead in developing and international fuel supply program. Such a program must be the center of any strategy to save the nonproliferation agenda in an era of nuclear renaissance.

The international component of the administration's Global Nuclear Energy Partnership is a good first step but it must evolve further. Because fuel supplies can never be unconditionally

guaranteed, the program should assure fuel access as long as certain nonproliferation guidelines are followed by participant countries.

Another important component will be that fuel suppliers maintain title of the fuel throughout the fuel cycle. This means that supplier nations must also have a workable spent fuel management strategy, including the United States. This should be expanded upon to codify new rules to govern commercial nuclear activities broadly. The most effective way to protect U.S. interests in an era of nuclear renaissance is to ensure that the rules and norms of the global nuclear industry are consistent with American ideals such as free markets, openness and transparency.

As part of this effort, fuel supplier states should agree to open their markets to international competition. Supplier companies, including state-owned companies, should operate as private for-profit firms, and every effort should be made to eliminate tariffs and quotas that artificially distort the commercial nuclear market. Doing this requires the U.S. to be fully engaged in the near term by ensuring that agreements such as 123 agreements respect proliferation concerns without unduly sacrificing commercial activity.

If these agreements do not strike this balance, the United States risks diminishing its influence over international trade policy by isolating itself from the global nuclear market.

Third, the United States must not cede control of any nuclear fuel services to an international body such as an international fuel bank or an international nuclear waste management agency. While an international fuel bank could have some merit as an insurance policy for countries whose fear of being denied access to fuel would limit their participation in a larger nuclear fuel supply program, such an effort must not be used to control nuclear fuel distribution broadly.

Furthermore, the international community should not be responsible for managing nuclear waste. Instead, each nation should operate under its specific rules and regulations as they pertain to nuclear waste issues. Reprocessing, permanent geologic storage and other fuel processing technologies would be brought to bear as each nation deems appropriate.

Instead of ceding power to international bodies, the United States should take a more active role in safeguards and verification. The International Atomic Energy Agency currently has a virtual monopoly over this responsibility. While the IAEA has a critical role in promoting safety, security and cooperation in the nuclear field, safeguards and verification need additional oversight.

A more active U.S. role, especially in activities involving fuel services, would have multiple benefits. First, it would allow the IAEA to focus its efforts on high-risk countries and activities. Second, it would provide another level of scrutiny for potential proliferation concerns, especially those associated with nuclear fuel services.

And finally, the U.S. should reiterate its support of the enduring role of Article 4 of the Nuclear Non-Proliferation Treaty. And the reality is that any country can pursue whatever technologies that it chooses. As the article states, a country's rights to pursue peaceful nuclear technologies are inalienable. These inalienability, however, is not absolute in the context of the NPT. It's contingent on fulfilling their obligations and responsibilities under the pact.

Any nonproliferation regime that does not respect the rights of individual states will ultimately fail. The key is to devise a system that promotes buy-in from both suppliers and consumers of nuclear fuel services. If the system is economically rational, credible and reliable, then peaceful

nuclear countries should find participation beneficial. Only those that would seek to use nuclear technology for nefarious purposes would find benefits in operating outside of the system.

In conclusion, the current nonproliferation regime provides the international community with the tools to control the spread of dangerous nuclear materials. However, none of these tools can magically prevent a dedicated nation or other international actor from seeking threatening capabilities.

This is not a nonproliferation policy problem or a commercial nuclear problem but a hostile regime problem. Preventing hostile regimes from acquiring nuclear capabilities requires the political will to use the available tools effectively. Furthermore, there will always be a struggle to keep technology of all sorts out of the hands of those that would misuse it. The struggle, however, is not justification to deny society the benefit of critical technologies such as nuclear power.

Thank you for this opportunity. I look forward to your questions.

REP. SHERMAN: Thank you.

And because I know he's going to be brief, I'm going to recognize first for questions Mr. Royce.

REP. ROYCE: Thank you, Mr. Chairman.

I'm going to ask you each to be very succinct on this. But you know Brad's view. You know my view on it. What are the prospects for achieving an international agreement to void the NPT's so-called right to enrich uranium or reprocess plutonium, which many nations, of course, now claim, which would leave them uncomfortably close to possessing a nuclear weapon?

The chairman and I obviously view this as a misinterpretation. But a real quick assessment as to this question.

MR. ALLISON: I think if put to a vote in the Board of Governors at the IAEA or at the U.N., the chances would be about zero to get agreement. So I think this is a -- something that'll have to be (annex ?), number one. Secondly, I have tried to think about how it can be commanded or coerced --

REP. ROYCE: Yes.

MR. ALLISON: -- and I don't think that seems likely either. I think what one might best hope for is that the Nuclear Suppliers Group would come to such a interpretation, which is in their interest, and would actually begin to enforce it.

And since the technologies --

REP. ROYCE: So we do it through the nuclear fuel bank; we get the concurrence and -- yeah --

MR. ALLISON: Right. But particularly with the Nuclear Suppliers Group --

REP. ROYCE: Right.

MR. ALLISON: -- but then over time trying to make this a -- or take away the legitimate components of the concern, then we -- if I'm operating a nuclear power plant, how am I going to get fuel?

REP. ROYCE: Right, right.

MR. ALLISON: But secondly, simply don't provide the technologies that are required for enrichment or reprocessing or, even specifically, for producing a fuel assembly after you've enriched uranium. I mean, it's a dirty little secret, but Iran's enrichment facility, which will produce and has produced 4 percent enriched uranium, which they say is for fuel for a nuclear power plant, which of course, they've already bought the fuel and leased it forever, so that's step one that's not too credible; step two is they can't take that fuel and create a fuel assembly, which is another technology, which is significantly guarded by the companies that own it. And they should significantly guard it and not provide it to Iran.

REP. ROYCE: And, Dr. Goldschmidt, do you agree with that general thrust? (No audible reply.) Yeah.

And Jack? You're --

MR. GOLDSCHMIDT: I would agree, but I would just like to add something, if I --

REP. ROYCE: Yes, sir.

MR. GOLDSCHMIDT: Concerning Article 4, one has to read it up to the end, which means that this right that is in the treaty is subject to compliance with Articles 1 and 2 of the treaty. And I think this is very important. And that's probably where some progress can be made in that sense that once a state has been found to be in noncompliance with its safeguards agreements or the NPT, then I think it is legitimate for the U.N. Security Council to decide that under those conditions, the right for sensitive fuel cycle activities may be suspended. And I say suspended, not cancelled, but suspended.

REP. ROYCE: And Jack? Your view?

MR. SPENCER: I agree that it's virtually impossible. And whenever I say "to reiterate support for Article 4," it's not because I want everyone to have, you know, fuel services all over the place. But instead of focusing on something that we may never achieve, we should focus on creating a system that creates buy-in for the rest of the world so we can better focus our nonproliferation efforts --

REP. ROYCE: You agree that enrichment will undermine the NPT, though, don't you?

MR. SPENCER: Yeah, without question. We need to control it.

REP. ROYCE: Mr. Kittrie?

MR. KITTRIE: (Off mike.) I agree that the idea of an unconditional right to an entire fuel cycle is a misinterpretation of the NPT, to which the Bush administration has unfortunately contributed. Somehow, as Pierre mentioned, the last words in conformity with Articles 1 and 2 of this treaty seem to have been lost in the interpretation.

It would be, it seems to me, very difficult to walk it back. It's really impossible to amend the NPT, since you need -- every member of the IAEA Board of Governors has a veto over any NPT amendment. The best way to amend the NPT is with a Security Council resolution, which is somewhat easier to get, a global legislative resolution like 1540. But barring that, I think you need to rely on incentives and, indeed, on the NSG to create a situation where in practice countries are dissuaded from getting enrichment and reprocessing.

REP. ROYCE: Thank you.

Mr. Chairman, thank you. Yield back.

REP. SHERMAN: Mr. Kittrick, I'm intrigued by that last answer because I do think it gives us our best chance to get the right interpretation. Which permanent members of the Security Council do you think would object to a Security Council resolution clarifying the NPT in the right way?

MR. KITTRICK: That's a very good question to which I'm afraid I don't have the answer. That would obviously be the key to get the P-5 on board. You would want to get the P-5 on board, and then you just need the support of four of the additional 11 Security Council members.

REP. SHERMAN: I think if you get five, you get the other four. I don't know if anyone else has a response to that.

Seeing none, I'm going to move on to the next question.

Dr. Allison, you alluded to how American citizens would respond if hit with a nuclear weapon, particularly in their own zip code. When I was growing up, they had those bomb drills. And at that point, it might have been kind of silly because if we were going to be hit by Soviet Weapons, it wouldn't have been one. It would have been at least 100, probably 1,000. There would be no medical care coming from outside my city. And, in the words of Khrushchev, the living would envy the dead.

If a single small nuclear weapon were exploded in one American city, I doubt the living would envy the dead. I would ask you to furnish for the record, and others on the witness panel in particular, current information about what the civil defense plans of the United States ought to be and, in particular, whether if the center of a city is hit, those half a mile, one mile, two miles from that center would be best to shelter in place or best to depart the area quickly.

Of course, we have no system of telling people which way the wind is blowing and which way they ought to be running. And I think the main reason for that is that if we adopted civil defense, we would have to admit to the American people that there was a problem.

So I look forward to gathering that information. I'll at least tell my constituents what to do. And the federal government will ignore the other 434 districts.

Let's go back to the --

MR. ALLISON: If I could, just in one line --

REP. SHERMAN: Yes.

MR. ALLISON: -- I would say the -- if one can only remember one thing, it would be first prevent --

REP. SHERMAN: Yes, I --

MR. ALLISON: -- but, secondly, shelter in place.

REP. SHERMAN: Hmm. Rather than departing the area? Even if that sheltering cannot be done underground? Even if shelter in place --

MR. ALLISON: Basically, what one wants is as much thick material between you and the radioactivity.

REP. SHERMAN: Gotcha.

MR. ALLISON: So it doesn't need to be a basement. It can be within a building.

REP. SHERMAN: Gotcha.

MR. ALLISON: But inside, not by a window, not by an open window. And actually, the speed at which the radioactive cloud diminishes and falls is about within two days. So if a person has a normal Red Cross-recommended domestic preparedness plan in which they have three days of water and food, if they stay inside for that period of time, their chances of surviving if they're not in the hot zone is quite good.

REP. SHERMAN: Well, we look forward to trying to get that information out to -- I don't know which member of the panel to ask this so I'll just see who wants to respond.

Did the United States make a critical diplomatic mistake in seeming to acquiesce to the wrong interpretation of Article 4?

MR. ALLISON: I think it's a wonderful question and extremely complicated and I'd -- Pierre --

REP. SHERMAN: We have time for one-word answers.

MR. ALLISON: I'd just say that the footnote point would be yes. But Pierre has a different view. And I think that maybe would be worth to hear.

MR. GOLDSCHMIDT: No, I'm not so sure that there is a wrong interpretation.

REP. SHERMAN: Well -- (laughs) -- the interpretation that I do not favor will be defined hereinafter as the wrong interpretation. Do you have a -- other than that, do you have a comment?

MR. GOLDSCHMIDT: No, except to say what Graham said before. I mean, it -- whether it's wrong or right, it's there. And it's not going to be changed. And we have to find --

REP. SHERMAN: I think the Professor Kittrie has given us a way to go. And I yield to our vice chairman, Mr. Scott.

REP. SCOTT: Thank you very much, Mr. Chairman.

As you know, we have a vote, so I've got about three minutes, I think we can go before the bell goes down.

It's been 63 years since a nuclear bomb has been detonated that affected mankind so severely. That was in Nagasaki and Hiroshima.

I'd like to ask you how much more powerful is this weaponry now compared to then, knowing the damage that it's done?

And then secondly, what is our greatest worry? What is the greatest threat to having a nuclear bomb go off in one of our cities, one of our -- or any other nation's cities that would affect human life? And by that, I mean would it be a bomb on the -- would it be the black market? Would it be from terrorists?

REP. SHERMAN: If I can interrupt, Mr. Scott, we have three minutes and 43 seconds to vote. We could get a -- is it your preference to come back or just get the question?

REP. SCOTT: Well, I want to -- yeah, just -- I'm just getting at one of those quick answer. I think it's important for this hearing --

REP. SHERMAN: We'll get a quick answer, and then we'll adjourn.

MR. KITTRIE: I can -- if I can just answer quickly, one, the bombs today are a lot bigger than they were then. But the bombs that a terrorist might make would probably be along the same size as the Hiroshima and Nagasaki. But the technology is different depending on who's giving those bombs.

I'd like to answer that second question, quickly, that I think the greatest problem that we face as the United States when it comes to nuclear terrorism today is that we wallow in our own arrogance while the rest of the world moves forward in a new era of nuclear renaissance and we isolate ourselves from that process and therefore are not prepared to influence as much as we otherwise could because we remain wed to the old ways of thinking of things.

REP. SCOTT: Thank you.

MR. ALLISON: Just do a quick version. I think the gravest threat is one bomb exploding in one city brought to us by somebody like Osama bin Laden, who's been working on this problem for a long time, coming into the country illicitly and devastating the heart of one of our great cities. And as I argue in this nuclear terrorism book, I think the likelihood of that happening is quite real. I make it more likely than not within a decade. And I wrote that in 2004. That means I think 51 percent or more likely.

Secondly, the weapons on the top of a missile today for the U.S. in terms of their destructive power would be thousands of times greater than Hiroshima. The kind of bomb that a terrorist will bring us looks like a 10-kiloton bomb, which is about the size of Hiroshima.

REP. SCOTT: Thank you. Thank you very much. Sobering news.

REP. SHERMAN: Thank you. Yeah, I regret the votes have occurred. I'd like to do a second round, but we stand adjourned.

Thank the witnesses for being here. Look forward to working with you.

END.