

THE U.S.-INDIA GLOBAL PARTNERSHIP: THE IMPACT ON NONPROLIFERATION

HEARING BEFORE THE COMMITTEE ON INTERNATIONAL RELATIONS HOUSE OF REPRESENTATIVES ONE HUNDRED NINTH CONGRESS

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WEDNESDAY, OCTOBER 26, 2005

HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERNATIONAL RELATIONS,
Washington, DC.

The Committee met, pursuant to notice, at 10:36 a.m., room 2172, Rayburn House Office Building, Hon. Henry J. Hyde (Chairman of the Committee), presiding.

Chairman HYDE. The Committee will come to order. President Bush has repeatedly said that preventing the spread of nuclear weapons is the most important challenge facing our world. No responsible person can dissent from that statement as the consequences of failure are beyond measure and constitute not merely a threat to our national survival but to civilization itself, for there is no margin for miscalculation.

Unwarranted hopes, cavaliered guesses and needless haste are likely only to speed our progression toward destruction. Every proposed change to U.S. or global nonproliferation policy requires the closest scrutiny. No grandly awaited triumph, no dream of fame, no nervous urgency, no insistent explanation, can be allowed to encourage us to knowingly undertake needless risks to summon Armageddon.

It is to ensure that we give sufficient respect to this reality that today's hearing is being held. The Administration's recently announced "global partnership" with India is in itself to be welcomed. For too long our two countries have been opposed to one another for reasons that have little grounding in any objective factor and have been blind of the logic of their own interest. I will refrain from casting blame on either side and will say only that I hope we are now past the era of squandered opportunities.

This agreement outlines many areas for joint action from space to the environment to the promotion of democracy. But by far, the most significant provision is that concerning cooperation on civilian nuclear energy. For any country, such an endeavor would be of enormous consequence and require considerable deliberation. I might point out that a similar agreement with China took 13 years to come fully into force, but for India, this potential cooperation carries with it a special significance, as it cannot proceed without our restructuring long-standing United States and global nonproliferation policy.

To implement the nuclear cooperation elements of the agreement, congressional assent must be obtained in the form of amending the relevant laws now forbidding such cooperation with India

and other countries which are not in compliance with key non-proliferation practices and conventions. Given the primacy of this subject and the many unknowns surrounding the overall agreement, there is much work to be done before that assent can be given.

I would like to address the subject of process in order to avoid any misunderstanding that might arise. Let me begin by stating for the record that I have as yet come to no settled conclusions regarding the merits of this aspect of the agreement. And I hope that I speak for the Members of this Committee in stating that I plan to seek the input of many different sources before I can feel the requisite confidence in doing so.

This panel today and others to follow are part of that process of consideration as we seek the analysis of experts long practiced in this arcane subject and solicit their recommendations for how the Congress might best consider the agreement and any modifications that may be required. For these reasons, it would be grossly irresponsible for this Committee and for Congress as a whole to act with unnecessary haste regarding a subject which can bear no false steps.

I am both gratified and concerned by statements from the Administration regarding this process, although this Committee and the Congress as a whole have received little, if any, information from the Administration regarding either the details of its ongoing discussions with the Indian Government, or the legislation it plans to introduce. I am certain that this oversight will be soon corrected. As it stands, the situation is both strange and unusual in that the Indian authorities know more about this important proposal than we in Congress. However, I trust this will soon be ameliorated.

Clearly, there is ample time for extensive consultations to be held and I am aware of no pressing deadline for action. I was pleased to hear Under Secretary Burns state at our last hearing that the Administration plans to work closely with this Committee and not seek to circumvent it in favor of a more hasty, unconsidered and, frankly, quite dangerous approach. These same points were conveyed in a recent letter to Secretary Rice that was signed by the Chairman and Ranking Members of our Committee and those of the Senate Foreign Relations Committee.

Having said that, I am troubled by a number of public statements by Administration officials that congressional support for the overall agreement is broad and that our consent is virtually guaranteed. I do not understand how these statements could be made with Congress having yet to be fully consulted. I know I have not been. I attribute these to a robust confidence that the Legislative and Executive Branches can find a mutually acceptable approach, an expectation I fully share.

But it is important to keep in mind that although the Executive Branch has wide latitude to conclude agreements with countries, it is the province of the Congress to make or amend laws. Our responsibility to the American people and to posterity simply will not permit any course other than a full and complete consideration of the many profound consequences, both those obvious and those not readily revealed to impatient eyes.

Now let me turn to my friend, Mr. Lantos, the Distinguished Ranking Democratic Member for such comments as he may wish to make, after which the Members will have 1 minute to make an opening statement, should they choose. Mr. Lantos?

Mr. LANTOS. Thank you very much, Mr. Chairman, and let me identify myself with your carefully crafted and very thoughtful opening statement. Before I come to my prepared statement, I would like to make a couple of observations.

First, we rarely have a panel as distinguished and as knowledgeable and as widely admired for their technical expertise as we have this morning and I want to thank them in advance for what I know is superb testimony which I read with great interest.

Secondly, I would like to ask unanimous consent to have the letter signed by Chairman Lugar, yourself, Ranking Member Joe Biden and myself be inserted in the record, Mr. Chairman.

Chairman HYDE. Without objection.

Mr. LANTOS. And then I will make an overall observation. To the best of my knowledge, none of us on this Committee has the technical expertise that our witnesses do. But after we have been instructed and advised on all of the technical aspects of this incredibly complex and important issue, at the end of the day, we will still be left with the necessity of making decisions on the basis of political and strategic criteria. Some of us are delighted that, at long last, the world's largest democracy, India, and the world's oldest democracy, the United States, are developing an increasingly significant, broad-based, and, we hope, permanent political-strategic alliance. And while I am convinced that the objections that many of our distinguished witnesses have to a hasty conclusion of an imperfect arrangement are likely to be dealt with as we perfect the proposed agreement between India and the United States, and then recognize that there are overarching strategic political criteria which must be brought into play before Congress decides to act.

I also agree with you, Mr. Chairman, very strongly, that there is no hurry in reaching a decision on this matter. This is a matter of utmost gravity and importance, and it must be dealt with with extreme care and caution.

Mr. Chairman, I thank you for convening today's hearing, the second in a series on the agreement announced last July between the United States and India, and what it might mean for the international effort to slow the spread of nuclear weapons.

Mr. Chairman, as I said in our last hearing on this subject, I believe that the July 18 agreement is a historic breakthrough in United States-Indian relations, and I was among the first in Congress to support it. At that hearing, I also expressed my deep concern over India's relationship with Iran. I observed that unless New Delhi were to help United States and European efforts to pressure Iran, a key trading partner, to verifiably halt its suspicious nuclear activities, the prospects for expanding United States peaceful nuclear cooperation with India would be in serious jeopardy in the Congress.

I am pleased, Mr. Chairman, that India has since then demonstrated that it takes this new partnership with Washington seriously. Last month, India gave critical support to United States efforts in the International Atomic Energy Agency to refer Iran's sus-

picious nuclear activities to the UN Security Council. Defying expectations, India's representative voted with the United States and the European Union to find that Iran was not in compliance with its safeguard obligations.

Mr. Chairman, I want to underscore the importance of India's vote in the IAEA. Iran is the most active state sponsor of terrorism in the world today. India's vote and its willingness to align itself with United States and European efforts to keep Iran from developing the ultimate terror weapon have come as a shock to the Ayatollahs of Terror in Tehran. Tehran had reportedly counted on an "eastern strategy," of relying upon its neighbors and trading partners to undermine any attempts to hold Iran to its solemn commitment under the Nuclear Nonproliferation Treaty not to acquire or develop nuclear weapons. That strategy is failing—due in no small measure to India's vote.

Tehran's crude threats to punish India and others with oil cutoffs and trade restrictions only increase these countries' suspicions and resolve to hold Tehran accountable. Tehran has since backed down from its threats, aware as never before that it has more to suffer from trade sanctions than those it would punish.

Mr. Chairman, I submit that India's vote and continued support in stopping the Iranian nuclear weapons program is in keeping with the nonproliferation regime established in the United States-India initiative. With India's strong support in the months and perhaps years to come, I am more hopeful than ever that diplomatic and economic pressure may yet turn the Ayatollahs in Tehran from their demented path toward nuclear weapons and the consequent further economic ruin of their long suffering country.

I would also like to highlight at least one other crucial but underappreciated benefit to the global nonproliferation regime from the U.S.-India Joint Statement. By committing to continue its moratorium on further nuclear weapons tests and part of a United States-India bilateral undertaking, New Delhi has, in effect, agreed to an international agreement not to test again, so long as both sides fulfill their pledges. This is a very important development, Mr. Chairman.

If India does not test, then Pakistan may also not test again. Islamabad did not test its nuclear weapons until India had first done so. In practical effect then, India's commitment could have significant regional nonproliferation benefits. If the Nuclear Suppliers Group, of which the United States is a founding member, agrees to allow member states to cooperate with India under similar terms as the joint statement, then India's nontesting commitment could expand into a binding multilateral deal. That, I submit, Mr. Chairman, would be an even greater benefit to the international nuclear nonproliferation regime.

Mr. Chairman, for purposes of today's hearing, I think it is important to remember that the details of the United States-India agreement are still being worked out. Approval and implementation of the agreement may take considerable time in both hemispheres. India has to decide when and how to separate and safeguard its military from its civilian nuclear activities.

The United States Congress will, in time, have to consider a formal Agreement for Peaceful Nuclear Cooperation as required by

U.S. law. And member states of the Nuclear Suppliers Group made clear last week at their Vienna meeting that they will await the final details of the United States-India agreement and its implementation before they decide whether or not to permit Nuclear Supplier Group members to expand nuclear-related exports to India.

Both the United States and India are well aware of the road ahead and of the many and diverse audiences which are watching their progress. I am confident that they will arrive at the destination we all desire, a strengthening of the international non-proliferation regime and India's full and valuable support for the world's nonproliferation efforts.

Mr. Chairman, I look forward to the testimony of our witnesses.

Chairman HYDE. Thank you, Mr. Lantos. The Chair will entertain 1-minute opening statements from such Members as choose to make them. And if you wish, indicate to the Chair. Mr. Rohrabacher?

Mr. ROHRABACHER. Thank you very much, Mr. Chairman. Let me note that I expressed support and still support the concept of better relations with India. I think that if we are going to have peace and stability in the world and the democratic movement in this world is to have progress, there are four pillars of friendship that need to be established. An alliance between the United States and Japan being two of the pillars. And the newcomers would be India and, if they so choose, Russia, a democratic Russia. Russia is in question now, but the Administration was moving forward with a strategic concept of a relationship with India, that is a good thing. However, the devil is always in the details. And I agree with Mr. Hyde and Mr. Lantos that we need to have oversight on the details. I applaud the Chairman's leadership on making sure that the Legislative Branch and this Committee is playing its role and insuring that the details accomplish the mission and that we are doing what we said we are going to do.

So thank you very much, Mr. Chairman, and I will follow your leadership on this issue.

Chairman HYDE. Thank you. The gentleman's time is expired. Mr. Berman?

Mr. BERMAN. Thank you, Mr. Chairman. I would be curious about the witnesses' reactions about how they think the Congress should play in this whole area? United States-India relationships are very important. Things that can make them stronger, as others have said, I think are important. But the proliferation issue to me is paramount and the question is, should Congress, rather than simply waiving the laws that now restrict the ability to have cooperation with an Indian civilian nuclear program, should we on the other hand draft neutral provisions that authorize that kind of cooperation with countries that meet certain very tough and rigorous conditions? Conditions on fissile material, production ends, moratoriums on the testing of nuclear weapons, the separation of civilian and military nuclear facilities, i.e., safeguards, kinds of export control laws that would have to be adopted and implemented in countries, and take a more sort of affirmative approach in promoting a more rigorous anti-proliferation regime and to use this as

essentially the case study of enhancing proliferation while ties with India?

Chairman HYDE. The gentleman's time has expired. Mr. Royce of California?

Mr. ROYCE. Thank you, Mr. Chairman, and I thank you for holding another hearing on the proposed U.S.-India Civilian Nuclear Cooperation Agreement. The agreement struck by the Administration is very consequential, meriting this Committee's close attention. As others have stated, our relationship with India has come very far in a short time. We should be applauded. We have a strong interest in deepening our relationship with India, an increasingly important country. And this has strong congressional support.

This nuclear agreement, whose specifics remain to be determined, has consequences beyond the United States-India relationship. As I said when the Administration testified, the goal of curbing nuclear proliferation, which is a global concern, should trump other factors when gauging this deal. WMD proliferation is that great a threat. The Administration states that this agreement strengthens the nonproliferation team. Others differ. I am interested in hearing about how this agreement impacts the nonproliferation treaty, the bedrock of nonproliferation efforts.

Chairman HYDE. The gentleman's time has expired. Mr. Ackerman of New York.

Mr. ACKERMAN. Without question, the July 18 statement is a dramatic change in U.S. nonproliferation policy, but the fact of the matter is that it makes sense for the United States to welcome India as one of the leading states with advanced nuclear technology. Over the last 30 years, India had demonstrated not only a successful mastery of a complicated technology, but the ability to insure that such technology does not get transferred into the wrong hands. It is here, Mr. Chairman, where I think opponents of the announced agreement get it wrong.

India is not a proliferation risk in the sense that it would share its own or our technology with rogue states or with terrorists. Simply because India made the sovereign decision not to sign the NPT does not make it a proliferation risk. In fact, the Administration has won many concessions from India regarding separating its civil and military programs to clearing its civilian program to the IAEA, signing additional protocol, continuing its moratorium on nuclear testing, to name just a few. These concessions have produced an uproar of opposition in New Delhi, yet the point is that the Indians have voluntarily undertaken them. Opponents of the agreement suggest that the entire fabric of the global nonproliferation regime has been rendered with this single decision, but let us examine that argument.

Clearly before the agreement, India was outside the mainstream of nonproliferation reforms. It is now committed to uphold or adhere to those norms. How can this be identified as anything but progress? Is not the implicit commitment to adhere to the Nuclear Suppliers Group guidelines and missile technology control regime exactly what we have been trying to get India to do for decades?

Chairman HYDE. Mr. Poe of Texas.

Mr. POE. Thank you, Mr. Chairman. In the 60s, India signed a 30 year agreement with the United States to only develop peaceful uses for their nuclear technology we exported to them. However, India broke its word and detonated a test nuclear bomb in 1974. India then refused to sign the Nuclear Nonproliferation Treaty and today almost all of India's nuclear facilities are not subject to the IAEA safeguards. Now we have United States officials actually proposing to join India in breaking its words, looking the other way and rewarding India for bad behavior. This is unacceptable. We either have a treaty or we do not and if we allow India to have a pass, there are a long line of other countries that would expect the same pass. If not, they must certainly consider the word of the United States to be as good as India's when it broke its word in 1960. Thank you, Mr. Chairman.

Chairman HYDE. Mr. Faleomavaega.

Mr. FALEOMAVAEGA. Mr. Chairman, in 1974, India exploded its first nuclear device. As a result, the United States refused nuclear cooperation with India for some 25 years. The United States pleaded with the so-called nuclear have nations as well as with the United Nations that if the world community is really serious about nonproliferation, then certainly those that have nuclear weapons need to be serious about dismantling totally the madness of having them, the right of the possession of these nuclear weapons. And I have to commend India for this singular effort in trying to plead with the world community, especially the Nuclear Five Club. What right is it that they have exclusive right to hold nuclear weapons and that any other country cannot? And I think India made that case very well. I am very happy that on July 18, 2005, President Bush and Prime Minister Singh signed a new global partnership and President Bush said it would work to achieve full civil nuclear energy cooperation with India that would also seek agreement with Congress to adjust United States laws and policies.

Chairman HYDE. The gentleman's time has expired.

Mr. FALEOMAVAEGA. Thank you, Mr. Chairman.

Chairman HYDE. You are welcome. Ms. Lee of California.

Ms. LEE. Thank you, Mr. Chairman. I also would like to thank our witnesses for being here and thank you for this hearing. I was quite frankly surprised to learn that the joint agreement following Prime Minister Singh's visit in July included a series of concessions that effectively circumvents 37 years of nuclear nonproliferation work by the United States and nonproliferation activists around the world and really could undermine the coerce of power of the NPT. This agreement for me raises more questions than it answers and I am not sure that the Administration has thought through the long term consequences of it.

For instance, how will the agreement affect our ability to negotiate and disarm North Korea and Iran? What is to prevent suppliers like France, Russia and China from making exceptions and taking risks by supplying nuclear technologies to other non NPT signatory nations? And finally, just given the arsenal which we have, the United States has, of nuclear weapons, how do we continue to dissuade other nations from acquiring nuclear weapon technologies? We do need better cooperation and closer ties with India on all fronts and I, too, would like to see how this agreement

really leads to an overall nonproliferation effort. Thank you, Mr. Chairman.

Chairman HYDE. Thank the gentlelady. Mr. Crowley of New York?

Mr. CROWLEY. Thank you, Chairman and thank you, gentlemen, for your testimony today. I have been following this debate very closely with Secretary Burns and Joseph in September and your discussion today. I think what the debate has done is bringing some rationale to what is a reality, the fact that India is a nuclear power.

What we need to do is to make sure that whatever decision our Government makes, that it comports with the long term goals and aims of the United States. And also at the same time, we also need to recognize again, we need to find a way to bring India and other such nations under a tent, an NPT, a nonproliferation tent. And how we go about doing that, I think, will also be, is very much in the aim and the goal of our country and, I think, the rest of the nuclear powers, as well. So with that I yield back, Mr. Chairman.

Chairman HYDE. Mr. Schiff of California.

Mr. SCHIFF. Thank you, Mr. Chairman. I think this is probably one of the most important issues that our Committee will wrestle with. And a number of issues that I would like the Committee to try to address or some of the suggestions for congressional action, one that was alluded to by my California colleague, Howard Berman, and that is, should we not carve out India, but rather address de facto states on a global basis? Second, should we oppose modifying the NPT to increase the number of recognized weapon states beyond the original five? Third, should we require the Administration to certify that de facto states are nonproliferating with nuclear transfers? Fourth, do we bar subsidies to support nuclear energy cooperation with de facto states? Five, do we renounce or require states like India to renounce an increase in the size of their nuclear weapons arsenal? And six, do we enact as a policy the goal of moving these states into the NPT, a goal of disarmament from a nuclear point of view and movement into the NPT? These are some issues that I would love to hear about.

Chairman HYDE. The gentleman's time has expired. Ms. Watson of California.

Ms. WATSON. Thank you so much, Mr. Chairman, for this hearing. I want to thank the witnesses as well and I want to refer to something the Chair has said in the opening statement. And that is that we are not sure of the details of the agreement between the President and the Prime Minister of India. I would hope that our Committee would play a very strong oversight position in watching this as it develops. And so I raise a question and I hope the panel will respond. And one issue is that this agreement should address what steps either country will take and as an example, should India accomplish most of all of its obligations to separate its military from civilian nuclear facilities before the United States begins to export significant nuclear equipment and materials? Or should the U.S. begin exporting some items before completion of this step?

Chairman HYDE. The gentlelady's time has expired.

Ms. WATSON. These are details that we need to address. Thank you.

Mr. ACKERMAN. Mr. Chairman?

Chairman HYDE. Who is seeking recognition?

Mr. ACKERMAN. Mr. Ackerman.

Chairman HYDE. Yes, Mr. Ackerman?

Mr. ACKERMAN. Mr. Chairman, I would like at this time to respectfully ask the Chair if he would yet again reconsider the policy of allowing Members only 1 minute? It is very noticeable that the attendance of Members at hearings as important as this is dwindling to the point of lacking. It is very hard to complete a thought. Most of us have stopped thanking, as we would like to, the Chair and Ranking Member, for calling the hearing because that takes up 15 percent of our time, taking away from the things that we should be saying.

It is very important to hear the thoughts of the Chairman and the Ranking Member. That adds so much to advance public policy, but in the interest of math, I point out that the time consuming by the Chair and Ranking Member take up 20 percent more of the time than all of the Members of the whole entire Committee who speak on the issue. And I think that we might benefit greatly by at least allowing people to finish.

Chairman HYDE. Well, I thank the gentleman for his comment. I would just state that the practice of giving Members a 1-minute opening statement is something we are trying out on a trial basis. I find one of the most disappointing aspects of these hearings is the imposition on witnesses who must sit and listen to what sometimes seem endless speeches from Members.

I know I never learned anything while I was talking. And I would like to have the witnesses testify and I know Members want to have something to say, too, and I want them to.

Mr. ACKERMAN. I appreciate the Chair's comments. I, for one, and I am sure I speak for most on the Committee, benefit from listening to the Chair speaking. And I think that perhaps we help to educate each other when we do that. An additional 60 seconds, I think, would not impose too greatly on the witnesses in any panel. Rare exceptions are to be taken into consideration.

But I think it is important in order for us to have a meaningful deliberation of the issues that we be able to express our views in a time a little bit more generous than 60 seconds.

Chairman HYDE. Well, the Chair will take under consideration the suggestion of the gentleman. I think we can adapt that time schedule, depending on the number of witnesses, the urgency, their availability. But I will take it under consideration, Mr. Ackerman.

Mr. ACKERMAN. I thank the Chair for that.

Chairman HYDE. Thank you. Mr. Burton of Indiana?

Mr. BURTON. I thank my colleagues for that educational interlude and I want to say to my learned Chairman that I do appreciate his and the Ranking Member's expertise on these issues. And I have listened to them. That is about 15 seconds of my minutes, so I better speed it up.

Let me just say that I will not comment on the hearing today, but I would like to say that Prime Minister Singh and President Musharaff have taken giant strides, in my opinion, in the last few months in bringing about a peaceful solution to a very thorny issue over in that part of the world.

And they are to be congratulated again and again for what they are doing. And toward that end, I, with the Chairman's approval and the Ranking Member's approval, we are taking a codel at the end of this month of probably 10 or 15 Members of Congress to both Dehli and Pakistan to talk to the leaders about this issue, the catastrophe that just took place over there and a number of other issues.

So I would just like to say, with all due respect, they are to be congratulated for what they doing in spite of a lot of the odds that are facing them. Thank you, Mr. Chairman. I yield back to the house my time.

Chairman HYDE. Thank you. Dr. Neil Joeck's extensive experience on nonproliferation issues includes service as Director for Counterproliferation Strategy at the National Security Council and as a member of the Policy and Planning Staff at the Department of State. He is currently a senior fellow at the Center for Global Security Research at the Lawrence Livermore National Laboratory and an adjunct professor of Political Science at the University of California, Berkeley.

Our second witness, Robert J. Einhorn, is a Senior Advisor in the CSIS International Security Program, where he works on a broad range of nonproliferation arms control and other national security issues. Before coming to CSIS, he served in the U.S. Government for 29 years, including Assistant Secretary for Nonproliferation at the Department of State.

David Albright, a physicist who conducts and publishes scientific research, is President of the Institute for Science and International Security. Mr. Albright has testified many times on nuclear issues before the Congress and trained many government officials in nonproliferation policy making.

We also welcome back to the Committee Henry Sokolski, Executive Director of the Nonproliferation Policy Education Center. He has served in the office of the Secretary of Defense, as a Senate aide to Dan Quayle and in several capacities in the private sector.

Lastly, the Committee will hear from Leonard Spector, who is Deputy Director of the Monterey Institute of International Studies Center for Nonproliferation Studies and leads the center's Washington, DC, office. Mr. Spector joined CNS from the U.S. Department of Energy, where he served as Assistant Deputy Administrator for Arms Control and Nonproliferation at the National Nuclear Security Administration.

Thank you all for coming today. I ask each of you to provide a 5-minute summary of your prepared testimony. Your full statement will be made a part of the record and so we will start with Dr. Joeck.

STATEMENT OF NEIL JOECK, PH.D., SENIOR FELLOW, CENTER FOR GLOBAL SECURITY RESEARCH, LAWRENCE LIVERMORE NATIONAL LABORATORY

Mr. JOECK. Thank you, Chairman Hyde, Congressman Lantos, Distinguished Members of the Committee. It is an honor to appear before you today to discuss the impact of nonproliferation of the United States-India global partnership. As you noted, I am currently a Senior Fellow at the Center for Global Security Research

at the Lawrence Livermore National Laboratory, but none of my comments represent the view of the Livermore National Laboratory or the U.S. Government. As you requested, I will summarize my written testimony, but request that the text be submitted for the record.

I would like to stress three broad points. First, the new bilateral agreement with India not only provides long term strategic benefits, but also makes India an active member of the international nonproliferation regime. The United States, in my view, should not miss this opportunity to work with India toward nonproliferation objectives that both sides value and that will enhance international security.

Second, this new agreement does not come at the expense of current nonproliferation efforts. The NPT and the NSG will continue to serve as mainstays of global nonproliferation policy. There is no question that the new agreement does raise serious questions in the minds of many NSG and NPT partners, as it does here in Congress and there is clearly a lot of work to be done to address these questions and hopefully allay the attendant concerns.

Third, nonproliferation has historically adapted to new conditions and new opportunities. We should continue to adapt in order to achieve the overall goal of nonproliferation policy, a more secure world. Regarding the new agreement, this new policy gives the United States an additional ally in the international effort to restrict the flow of nuclear technology. One manifestation of India's new approach is its agreement adhere to the NSG and MTCR guidelines. As India further develops its advanced technology, insuring that it take part in the international agreements to limit the spread of this technology will enhance international security.

The agreement with India contains a second benefit in that it recognizes the value of safeguards and the role of the IAEA in ensuring against diversion of sensitive technology. India has accepted this norm by agreeing to separate its civilian and military facilities, agreeing to place safeguards on its civilian reactors and accepting IAEA monitoring of the civilian facilities. Again, important concerns have been raised about the details of these safeguards and, again, there is a lot of hard work to be done as both sides negotiate the agreement. But we should not overlook the powerful symbolism of the step that India has already taken.

A long sought item on the international nonproliferation agenda has been to end fissile material production worldwide and to sign a fissile material control treaty. India's commitment to work toward this long standing nonproliferation objective represents another key advantage in the new partnership.

Again, critics have rightfully asked whether the United States could have gotten a better deal by insisting that India cap its production of plutonium and highly enriched uranium for weapon purposes? This is a reasonable criticism of any deal, you can always hold out for more.

I would argue that the totality of the new relationship with India makes it a deal worth having, rather than risking that it start to come apart because of this omission.

The new agreement with India recognizes that international security is achieved through a layered approach. For years, India has

been on the margins of the global nonproliferation regime. Indeed, India was a target of certain nonproliferation measures. Despite those efforts, Indian leaders concluded that they needed nuclear weapons to enhance their national security.

Like other responsible parties, however, India has now committed itself to stopping proliferation by adopting many of the measures that the United States values. The new agreement formalizes a cooperative relationship that will increase international security, thus addressing the fundamental goal of U.S. nonproliferation policy.

Regarding our current nonproliferation efforts, the new policy does not require that the U.S. abandon the NPT, the Nuclear Suppliers Group, or any of the effective measures adopted over the years to stop proliferation. The NPT remains a powerful, multilateral security device that has enhanced international security. Similarly, the NSG continues to control and monitor the flow of sensitive nuclear technology. This will not change.

The price to the United States for these changes and the inclusion of India as a member of the nonproliferation community, though not of the NPT, appears to be high. Congress must change or amend the law, which is no small accommodation. With India having now agreed to place safeguards on its civilian program, we must consider whether to change the law, thereby taking advantage of India's new thinking, or maintain the law and leave all of India's nuclear facilities unsafeguarded. Changing or amending the law would not mean that we or the rest of the nonproliferation community will incautiously transfer sensitive nuclear technology. It also would not mean that we or other states will stop working to further global nonproliferation objectives. It will not be the death knell for the NSG.

Changing or amending the law would, however, provide an incentive to India not only to adopt valuable nonproliferation objectives that we value highly, but also become an active member of the nonproliferation community. Since my time is about to expire, I will end my comments at that point.

[The prepared statement of Mr. Joeck follows:]

PREPARED STATEMENT OF NEIL JOECK, PH.D.,¹ SENIOR FELLOW, CENTER FOR GLOBAL SECURITY RESEARCH, LAWRENCE LIVERMORE NATIONAL LABORATORY

Chairman Hyde, Congressman Lantos, distinguished members of the committee: it is an honor to appear before you today to discuss the impact on nonproliferation of the U.S.-India global partnership. I am currently a Senior Fellow at the Center for Global Security Research at the Lawrence Livermore National Laboratory, but none of my comments represent the views of the Livermore National Laboratory or the U.S. Government. I will summarize my written testimony but request that the text be submitted for the record.

The United States and India have launched an ambitious new global partnership with strategic, economic, and energy dialogues. One component of the energy dialogue would allow the US to transfer nuclear technology to India as India takes a number of nonproliferation steps, including measures to safeguard its civilian nuclear infrastructure. The civilian nuclear element of the new partnership requires that we keep two balls in the air at the same time. Although we want to expand our bilateral relationship with India, we also want to maintain our strong nonproliferation policy. Neither should come at the expense of the other.

¹The views expressed here are the author's own; they do not represent either the Lawrence Livermore National Laboratory or the U.S. Government.

This hearing addresses the nonproliferation side of the agreement. In the eyes of many nonproliferation specialists, some of whom you are hearing from today, this new relationship rewards India for its recalcitrance regarding the Nuclear Nonproliferation Treaty (NPT); it undercuts countries that accepted nuclear constraints; it compromises longstanding U.S. nonproliferation policy and the global nonproliferation regime. Such concerns are reasonable. They deserve a thoughtful answer before implementing the new policy.

The history of nonproliferation policy has been one of adaptation and change. Our nonproliferation policy goes back to the 1940s with the Baruch Plan and the Acheson-Lilienthal Plan. These early ideas for nuclear technology control met with resistance from the Soviet Union, so we developed the Atoms for Peace approach. If the spread of nuclear technology could not be stopped, if bilateral measures were unavailable, then international monitoring might be a means of control. This approach did not stop new states from developing weapons, however, so the NPT was negotiated, incorporating some of the earlier approaches. India's nuclear test in 1974, shortly after the NPT entered into force, made clear that additional layers would have to be added to the nonproliferation regime. The Zangger Committee and the Nuclear Suppliers Group were formed to restrict nuclear technology before it was transferred, rather than just monitoring its use after it was received. Congress added a number of elements to the nonproliferation regime by amending the Atomic Energy Act, the Foreign Assistance Act, and the amendments as well. The evasive actions of North Korea made clear the need for the Additional Protocol. More recently, additional measures have been added such as UNSCR 1540, the Proliferation Security Initiative, and President Bush's enrichment and reprocessing proposals. Although we must continue to implement policies that work, our history shows that new contingencies frequently require policy adaptation or change.

It is necessary to look for new ways to achieve our nonproliferation and security objectives: the agreement with India represents such an effort. The new policy does not require that we abandon the NPT, the Nuclear Suppliers' Group (NSG), or any of the effective measures we have adopted over the years to stop proliferation. In marking its 35th anniversary, President Bush called the NPT the "key legal barrier" to nuclear weapons proliferation. The NPT remains a powerful multilateral security device that has enhanced international security. It has not eliminated all insecurities by any means—some states chose not to sign up, some that did have pursued nuclear weapons despite their commitments to the contrary, and the context for global disarmament remains elusive. So long as international insecurities and security competition persist, therefore, the world must find new ways to address them.

The new agreement with India recognizes that international security is achieved through a layered approach. We have added to our nonproliferation and counterproliferation tool kit over the years. The agreement with India, while acknowledging the reality of India's nuclear weapons program, will supplement global efforts to enhance global security. For years, India has been on the margins of the global nonproliferation regime. Indeed, India was a target of some of the nonproliferation measures cited above. Despite those efforts, Indian leaders concluded that they needed nuclear weapons to enhance India's security. Like other responsible powers, however, India has now committed itself to stopping proliferation by adopting many of the measures that we value. The new agreement formalizes a cooperative relationship that will increase international security, thus addressing the fundamental goal of our nonproliferation policy. We have an opportunity to work with New Delhi on shared nonproliferation objectives as India takes steps to align its nonproliferation posture with prevailing international norms and practices.

The new relationship with India contains important advantages for international nonproliferation efforts. Looked at broadly, we now have an additional ally in the international effort to restrict the flow of nuclear technology. One manifestation of India's new approach is its agreement to adhere to the NSG and MTCR guidelines. As India further develops its advanced technology, ensuring that it take part in international agreements to limit the spread of this technology will enhance international security. The agreement with India contains a second valuable element for the nonproliferation regime in that it recognizes the value of safeguards and the role of the IAEA in ensuring against diversion of sensitive technology. India has accepted this norm by agreeing to separate its civilian and military facilities, agreeing to place safeguards on its civilian reactors, and accepting IAEA monitoring of the civilian facilities. A long-sought item on the international nonproliferation agenda has been to end fissile material production worldwide and to sign a Fissile Material Control Treaty. India's commitment to work with us toward this longstanding nonproliferation objective represents another key advantage in the new partnership. Taken as a whole, these measures demonstrate India's endorsement of key nonproliferation objectives.

The price to the United States for these changes and the inclusion of India as a member of the nonproliferation community (though not of the NPT) appears to be high. Congress must change or amend the law, which is no small accommodation. If the law represents fundamental American values or principles, we should not seek to change it. The Nuclear Nonproliferation Act of 1978 (NNPA), an amendment to the Atomic Energy Act, requires that a state adopt safeguards on its entire nuclear infrastructure before the US will transfer it any sensitive nuclear technology. It was adopted to achieve nonproliferation and national security objectives. With India having now agreed to place safeguards on its civilian program, we must consider whether to change the law, thereby taking advantage of India's new thinking, or maintain the law and leave all of India's nuclear facilities unsafeguarded. Changing or amending the law would not mean that we or the rest of the nonproliferation community will incautiously transfer sensitive nuclear technology; it also would not mean that we or other states will stop working to further global nonproliferation objectives; it will not be the death knell for the NSG. Changing or amending the law would, however, provide an incentive for India not only to adopt valuable nonproliferation objectives that we value highly, but also become an active member of the nonproliferation community.

Having changed the Atomic Energy Act in 1978 to require full-scope safeguards as a condition of nuclear supply, the US in turn pressured the NSG to adopt similar standards. The NSG finally did so in 1993; full scope safeguards have been the standard for nuclear technology transfer ever since. A number of states that gave up nuclear ambitions are now members of the NSG and can be expected to demand to know why an exception should be made for India. The answer goes back to the goals of the NPT. Nonproliferation is at heart national security policy. Each nation that joined either the NPT or the NSG did so as sovereign states making careful judgments about how best to ensure their own and international security. Because of those decisions, the NPT continues to be the strongest and broadest multilateral security treaty in existence; the NSG continues to be a powerful tool for controlling the flow of sensitive technology; forgoing nuclear weapons continues to be the wisest policy choice for most states to enhance security. The new agreement with India does not alter those conclusions. Instead, the new agreement expands the list of countries committed to preventing further proliferation, thereby enhancing global security.

To conclude, let me reiterate that U.S. nonproliferation policy has changed over the years to meet new challenges to security. The new partnership with India provides an opportunity to increase global security while adapting our nonproliferation policy to new conditions. This concludes my testimony; I would now be happy to take questions from the committee.

Chairman HYDE. Mr. Einhorn?

**STATEMENT OF THE HONORABLE ROBERT J. EINHORN,
INTERNATIONAL SECURITY PROGRAM, CENTER FOR STRATEGIC
AND INTERNATIONAL STUDIES**

Mr. EINHORN. Mr. Chairman, Congressman Lantos, thank you for giving me the opportunity to testify this morning. My guess, Mr. Chairman, is that everyone on this panel and probably everyone in your Committee supports a fundamentally improved United States-Indian bilateral relationship. At issue is whether we should pursue that important goal in a way that undermines another goal of equal or perhaps even greater importance—preventing nuclear proliferation. The Administration claims that the July 18 joint statement is a net nonproliferation gain. I think the deal at least as it currently stands is a loss for nonproliferation.

According to the Administration, a key benefit of the agreement is that it brings India into the international nonproliferation mainstream. But India, to its credit, has been moving in that direction for quite some time. The commitments made by India on July 18 add very little. For the most part, they are either reaffirmations of existing Indian positions or codification of existing Indian policies and practices. The genuinely new element, the pledge to separate

military and civilian nuclear activities and place civilian facilities under IAEA safeguards, is largely symbolic. It has no effect on India's ability to continue producing fissile material for nuclear weapons at facilities not designated as eligible for safeguards.

In any event, the nonproliferation gains of the joint statement are meager compared to the damage to nonproliferation goals that would result if the deal goes forward as it currently stands. The Bush Administration's initiatives in the Nuclear Suppliers Group to tighten export controls would be harder to achieve if at the same time we are asking the group to relax its rules to suit the United States, because we no longer support the rule. By seeking an exception to the rules to accommodate America's new friendship with India, the deal will make other suppliers less inhibited about engaging in risky nuclear cooperation with their own special friends—Iran in the case of Russia, Pakistan in the case of China. By sending the signal that the United States will tolerate and eventually accommodate a decision to acquire nuclear weapons, it will reduce the perceived costs to states that might consider going nuclear in the future.

In the near term, it will make it more difficult to deal with proliferation challenges like Iran. Already the Iranians are asking publicly while they, as an NPT party, should give up their right to an enrichment capability while India, which rejected the NPT and acquired nuclear weapons, is being offered nuclear cooperation. This argument wins support for Iran internationally.

In general, the deal conveys the message that the United States, the country the world has always looked to as the leader in the fight against proliferation, is now giving nonproliferation a back seat to other foreign policy goals. And this will give others a green light to assign a higher priority to commercial and political considerations relative to nonproliferation. In my view, the damage, the nonproliferation damage likely to result from the deal can be minimized if several improvements are made, either by the United States and India acting themselves, by the U.S. Congress, by the Nuclear Suppliers Group or by a combination of these.

I would recommend four improvements. The first and most important would be an Indian decision to stop producing fissile material for nuclear weapons, perhaps as part of a multilateral moratorium. A multilateral production halt would make a major contribution to fighting nuclear terrorism by capping stocks of bomb making materials worldwide and thereby making those stocks easier to secure against theft or seizure.

Without such a production moratorium in place, the United States-India deal could actually facilitate an increase in India's nuclear weapons capability. India's indigenous uranium supplies are quite limited and must now be used to meet their civil and military requirements. A newly acquired ability to import uranium for civil needs would free up domestic supplies to be used exclusively in the weapons program, permitting a substantial build up if the Indian Government so decided.

India has said that it is willing to assume the same responsibilities and practices as the other nuclear powers. It so happens that the five original nuclear reference states have all stopped pro-

ducing fissile material for nuclear weapons. India should be asked to join them.

Second, India should be asked to play a more active role in helping the United States address today's most acute proliferation challenges, especially Iran. India's yes vote on the recent IAEA board resolution that found Iran in noncompliance with its nonproliferation obligations was a welcome step. But since that vote, Indians have tried to mollify Iran, saying that they had acted in Iran's interest by getting the Europeans to back off from pursuing referral to the UN Security Council. The key test in the months ahead will be whether India makes a sustained and determined effort to persuade Iran to forego its enrichment capability and whether, if it becomes necessary, it votes in favor of a resolution referring the issue to the UN Security Council.

Third, the risks of the nuclear deal could be reduced by preserving a distinction between NPT parties and non parties in terms of the nuclear exports they would be permitted to receive. By calling for full nuclear cooperation with India, the deal undermines the long standing principle of giving NPT parties benefits in the civil nuclear energy area that are unavailable to non parties. We should preserve a semblance of that principle by excluding from permissible cooperation with India equipment, materials and technology related to enrichment, reprocessing and other sensitive fuel cycle facilities. This would permit India to acquire uranium, fuel supplies and the nuclear reactors, but it would retain the ban on transfers of those items that are most closely related to a nuclear weapons program.

Fourth and finally, I believe nonproliferation risks could be reduced by implementing the nuclear deal in a country neutral matter, not as a special exception to the rules for India alone. A problem with the India only exception is that it accentuates concerns that the United States is acting selectively and self-servingly on the basis of its own foreign policy calculations, rather than on the basis of objective factors related to nonproliferation performance. To avoid this pitfall without opening the door to nuclear cooperation in cases where it is not yet merited, modifications should be made in U.S. law and in Nuclear Supplies Group guidelines that would permit nuclear cooperation with any state not party to the NPT that meets certain rigorous requirements of responsible nuclear behavior. My prepared statement outlines what those criteria might be.

Finally, Mr. Chairman, taken together, I believe these improvements in the July 18 nuclear deal would transform a net nonproliferation loss into a net nonproliferation gain. They would enable the United States to advance its strategic goals with India as well as its nonproliferation interests, not serve one at the expense of the other. Thank you, Mr. Chairman.

[The prepared statement of Mr. Einhorn follows:]

PREPARED STATEMENT OF THE HONORABLE ROBERT J. EINHORN, INTERNATIONAL SECURITY PROGRAM, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES

THE U.S.-INDIA NUCLEAR DEAL

Mr. Chairman, thank you for the opportunity to testify before the Committee on the nonproliferation implications of the recent agreement between the United States and India on civil nuclear cooperation.

The United States has an important national interest in strengthening relations with India and making it a strategic partner in the 21st century. But efforts to strengthen the U.S.-Indian relationship should not be pursued in a way that undermines a U.S. national interest of equal and arguably greater importance—preventing the proliferation of nuclear weapons. That is precisely what the Bush Administration has done in the nuclear deal reached this past summer during Prime Minister Manmohan Singh's visit to Washington.

In the Joint Statement released on July 18th, India agreed to take several steps to demonstrate its commitment to being a responsible nuclear power and a supporter of nonproliferation goals. In exchange, the U.S. Administration agreed to seek changes in U.S. law and multilateral commitments to permit exports of nuclear equipment and technology to India—a radical departure from longstanding legal obligations and policies that precluded nuclear cooperation with states not party to the Nonproliferation Treaty (NPT).

Administration officials have claimed that the deal, by aligning India more closely with the policies and practices of the international nonproliferation regime, is a net gain for nonproliferation. In his testimony before this Committee on September 8th, Under Secretary of State Robert Joseph maintained that "India's implementation of its agreed commitments will, on balance, enhance our global nonproliferation efforts, and we believe the international nuclear nonproliferation regime will emerge stronger as a result." Upon close scrutiny, however, it appears that the nonproliferation benefits of the July 18th Joint Statement are rather limited.

Nonproliferation gains are modest

Several of the steps pledged by India are simply reaffirmations of existing positions, including India's commitments to continue its unilateral moratorium on nuclear weapons testing, strengthen its national system of export controls, and work toward the conclusion of a multilateral fissile material cutoff treaty. In view of unsuccessful efforts for over a decade to get negotiations underway on a fissile material cut-off treaty and no near-term prospect of removing obstacles to beginning negotiations, this last pledge is unlikely in the foreseeable future to have any effect on India's ongoing program to produce more fissile materials for nuclear weapons.

Other Indian commitments in the Joint Statement break new ground, but their actual nonproliferation gain is modest. For example, the pledge to refrain from transferring enrichment and reprocessing technologies to countries that do not already possess them is welcome. But since India—to its credit—has never transferred those technologies and has no plans to do so, it will have little practical consequence. Moreover, adherence to the guidelines of the Missile Technical Control Regime and the Nuclear Suppliers Group (NSG) is also positive; but it is a step New Delhi was already planning to take before the July 18th Joint Statement as part of a U.S.-Indian dialogue on technology transfer and export control called "Next Steps in the Strategic Partnership."

The commitment that has drawn the most criticism within India is the pledge to separate civilian and military nuclear facilities and place civilian facilities voluntarily under IAEA safeguards and the Additional Protocol. Indian critics claim that, because of the co-location of civilian and military activities at a number of Indian nuclear facilities, implementation of the commitment could be expensive and time-consuming and could impose unwarranted constraints on military programs. In response to these concerns, Indian officials have stressed that India alone will decide which facilities are subject to safeguards and have suggested that only a relatively small number will be put on the civilian list. While recognizing that the designation of civilian facilities (i.e., those eligible for safeguards) is an Indian prerogative, U.S. officials have made clear that, to be credible, any list should be complete.

However, regardless of how inclusive or selective the list turns out to be, the nonproliferation value of India's commitment to place certain nuclear facilities under IAEA safeguards will be rather limited. The purpose of IAEA safeguards for non-nuclear weapon states party to the NPT is to verify that no nuclear materials are diverted to a nuclear weapons program. But as long as India continues to produce fissile materials for nuclear weapons (at facilities not included on the safeguards list), its willingness to apply safeguards to facilities designated as civilian serves primarily a symbolic function—to reduce the perceived discrimination between coun-

tries that are obliged to accept safeguards on all their facilities and those that are not.

Beyond this symbolic value, willingness to put civilian facilities under safeguards also serves a more practical function. If members of the Nuclear Suppliers Group change their rules and permit nuclear cooperation with India, they will presumably confine such cooperation to safeguarded facilities in India. (NPT Article III(2) obliges them to engage in nuclear cooperation only with safeguarded facilities in non-weapon states. Since the Bush Administration is not seeking to give India nuclear weapon state status under the NPT, III(2) will continue to apply to India.) The list of safeguarded Indian facilities will therefore serve to define the scope of permissible nuclear cooperation. For India, the trade-off will be between broadening the list (to expand opportunities for cooperation) and narrowing the list (to shield facilities from international scrutiny). However it chooses, the fundamental shortcoming of India's July 18th safeguards commitment remains—it has no effect on India's ability to continue producing fissile material for nuclear weapons at facilities not designated as eligible for safeguards.

Downsides of the deal

Administration officials are right that the various pledges contained in the Joint Statement move India closer, both in rhetorical and practical terms, to the international nonproliferation mainstream it has shunned for over 30 years. Still, the nonproliferation gains of the U.S.-India nuclear deal are meager compared to the major damage to nonproliferation goals that would result if the deal goes forward as it currently stands.

The U.S.-India deal would make it harder to achieve key Bush Administration nonproliferation initiatives. The U.S. is now asking the 45-nation Nuclear Suppliers Group to permit nuclear cooperation only with countries that adhere to the IAEA's Additional Protocol and to ban transfers of enrichment and reprocessing technologies to states that do not already possess fuel-cycle facilities. But getting NSG partners to tighten the rules in ways favored by the U.S. will be an uphill battle if they are also being asked to bend one of their cardinal rules (i.e., no nuclear trade with non-parties to the NPT) because it no longer suits the U.S.

By seeking an exception to the rules to accommodate America's new special friendship with India, the deal would reinforce the impression internationally that the U.S. approach to nonproliferation has become selective and self-serving, not consistent and principled. Rules the U.S. initiated and championed would be perceived as less binding, more optional. Russia and China would feel less inhibited about engaging in nuclear cooperation that the U.S. might find risky and objectionable with special friends of their own—Iran and Pakistan, respectively.

The nuclear deal in its present form has produced resentment on the part of close U.S. friends like Japan, Germany, and Brazil who were forced to choose between nuclear weapons and civil nuclear cooperation. They chose the latter, giving up the weapons option and joining the NPT to realize the benefits of nuclear cooperation. Now that India has been offered the opportunity to have its cake and eat it too, many non-nuclear NPT parties feel let down. Not wishing to harm relations with either India or the United States, they are unlikely to make a public fuss over the sudden reversal of U.S. policy (on which they were not consulted). But they will be less inclined in the future to make additional sacrifices in the name of nonproliferation.

The U.S.-India deal could also reduce the perceived costs to states that might consider "going nuclear" in the future. In calculating whether to pursue nuclear weapons, a major factor for most countries will be how the U.S. is likely to react. Implementation of the deal would inevitably send the signal, especially to countries with good relations with Washington, that the U.S. will tolerate and eventually accommodate a decision to acquire nuclear weapons.

In the near term, U.S. plans to engage in nuclear cooperation with India will make it more difficult to address proliferation challenges such as Iran. Of course, Iran's interest in nuclear weapons long pre-dated the India deal. But the deal has strengthened the case Iran can make—and is already making—internationally. Why, Iranian officials ask publicly, should Iran give up its right as an NPT party to an enrichment capability when India, a non-party to the NPT, can keep even its nuclear weapons and still benefit from nuclear cooperation? It is an argument that resonates well with many countries and weakens the pressures that can be brought to bear on Tehran.

In general, the Bush Administration's policy shift conveys the message that the United States—the country the world has always looked to as the leader in the global fight against proliferation—is now de-emphasizing nonproliferation and giving it a back seat to other foreign policy goals. Other countries can be expected to follow

suit in assigning nonproliferation a lower priority relative to political and commercial considerations in their international dealings, and this would have negative, long-term consequences for the global nonproliferation regime.

Making the deal a nonproliferation gain

The damage can be minimized—and the deal transformed from a net nonproliferation loss to a net nonproliferation gain—if several improvements are made in the course of implementing the July 18th Joint Statement, either by the governments of India and the U.S. themselves, by the U.S. Congress in adopting new legislation, by the Nuclear Suppliers Group in modifying its guidelines, or by a combination of these.

The most important improvement would be an Indian decision to stop producing fissile materials for nuclear weapons. India need not stop such production unilaterally, but as part of a multilateral moratorium pending completion of an international fissile material cutoff treaty. A multilateral production halt would make a major contribution to fighting nuclear proliferation and nuclear terrorism by capping stocks of bomb-making materials worldwide and thereby making those stocks easier to secure against theft or seizure—in India, Pakistan, or elsewhere.

Without a moratorium on fissile material production, the U.S.-India deal could actually facilitate the growth of India's nuclear weapons capability. India's indigenous uranium supplies are quite limited. Under current nonproliferation rules—with India unable to buy natural uranium on the world market—India must use those limited supplies for both civil power generation and nuclear weapons, and the trade-off will become increasingly painful. Under new rules, India could satisfy the needs of the civil program through imports, freeing up domestic uranium supplies for the weapons program and permitting, if the Indian government so decided, a continuing and even major increase in bomb-making material. A production moratorium would preclude such an increase.

Indian Foreign Secretary Shyam Saran said in July that India “is willing to assume the same responsibilities and practices—no more and no less—as other nuclear states.” It so happens that the five original nuclear weapon states (U.S., Russia, France, U.K., China) have all stopped producing fissile materials for nuclear weapons. Applying the “no more, no less” standard, it would be reasonable to ask India to join the others. India claims that it does not have a strategic requirement for parity with the other nuclear powers (including China) and that it seeks only a “credible minimum deterrent capability.” If that is the case, then perhaps it can soon decide that it has sufficient plutonium for its deterrence needs and can afford to forgo further production.

Another way to strengthen the July 18th agreement would be for India to assume a more active and constructive role in helping the United States address today's most acute proliferation challenges, especially the challenge posed by Iran. Given its desire to make Iran a long-term source of energy supplies, India has been reluctant to press Iran on its nuclear program. During a September visit to Tehran, Indian Foreign Minister Natwar Singh made public remarks supportive of Iran's position on the nuclear issue and critical of the approach taken by the United States. The remarks produced a sharp backlash by Members of Congress across the political spectrum, including several strong supporters of India, who made clear that India's failure to side with the U.S. on the Iran nuclear issue would jeopardize Congressional support for the legislative changes needed to implement the U.S.-India nuclear deal.

In response to these Congressional warnings and tough messages conveyed in person by President Bush and Secretary Rice to their Indian counterparts, the Indians on September 24th joined the U.S. and Europeans in voting yes on an International Atomic Energy Agency Board resolution finding Iran in noncompliance with its nonproliferation obligations but deferring the matter of when and how the Iran question would be referred to the United Nations Security Council. This was a positive step but not yet an indication that India is prepared to use its influence in a sustained and determined way to get Iran to abandon its plans for an enrichment facility capable of producing both fuel for civil nuclear reactors and fissile material for nuclear bombs. Indeed, since the IAEA vote, the Indians have sought to mollify the Iranians, stating that they had acted in Iran's interest by persuading the Europeans to back down from seeking an immediate referral to the UNSC. The key test in the months ahead will be whether India makes a real effort to persuade Iran to forgo an enrichment capability and whether it eventually supports referral to the Council, which is required by the IAEA Statute after a Board finding of noncompliance.

The risks of the nuclear deal could also be reduced by preserving some distinction between NPT parties and non-parties in terms of the nuclear exports they would be permitted to receive. A long-standing element of the nonproliferation regime has

been the “NPT preference policy”—giving NPT parties benefits in the civil nuclear energy area not available to those outside the NPT. The Joint Statement undermines that policy by calling for “full” nuclear cooperation with India. A way of maintaining some preferential treatment for NPT parties would be to modify U.S. law and the NSG guidelines to permit nuclear-related exports to non-parties *except* equipment, materials, or technologies related to sensitive fuel-cycle facilities, including enrichment, reprocessing, and heavy water production. Such a distinction would permit India to acquire natural uranium, enriched fuel, nuclear reactors, and a wide range of other nuclear items, but would retain the ban on transfers of those items that are most closely related to a nuclear weapons program.

In addition to precluding any cooperation with India in the area of sensitive fuel-cycle capabilities (even under IAEA safeguards), the U.S. should permit cooperation in less sensitive nuclear areas only under safeguards. As noted earlier, India will remain a non-nuclear weapons state (NNWS) as defined by the NPT, and Article III(2) allows nuclear exports to NNWSs only under IAEA safeguards. Moreover, consistent with existing U.S. law, such exports should only be permitted to facilities that are under safeguards *in perpetuity* (under facility-specific, or INFCIRC/Rev.2, safeguards agreements with the IAEA)—not to facilities under voluntary safeguards arrangements that allow countries to withdraw materials or facilities from safeguards for national security reasons. The choice would be up to India. If it wished to benefit from nuclear cooperation at a particular facility, it would have to put in place a facility-specific safeguards agreement at that facility.

Nonproliferation risks could also be reduced by implementing the nuclear deal in a country-neutral manner—not as a special exception to the rules for India alone. Although the Administration has been slow to indicate how specifically it would seek to adjust U.S. law and NSG guidelines, it has suggested that one option would be to leave the general rules in place but waive their application in the special case of India because of its qualifications as “a responsible state with advanced nuclear technology.” A problem with that option is that it would accentuate concerns that the U.S. is acting selectively on the basis of foreign policy considerations rather than on the basis of objective factors related to nonproliferation performance. Moreover, in the Nuclear Suppliers Group, where changing the guidelines requires a consensus, some countries—notably China—might well resist a country-specific approach and press for permitting nuclear cooperation with other non-parties to the NPT with whom they are friendly (e.g., Pakistan).

To avoid the pitfalls of making a country-specific exception without opening the door to nuclear cooperation in cases where it is clearly not yet merited, the Administration should propose modifications of U.S. law and the NSG guidelines that would permit nuclear cooperation (except in sensitive parts of the fuel cycle or in unsafeguarded facilities) with any state not party to the NPT that meets certain criteria of responsible nuclear behavior. To avoid creating an incentive for countries to withdraw from the NPT, the modified rules should apply only to countries that were outside the NPT as of a specified date, which should be chosen to exclude North Korea and include only India, Pakistan, and Israel. For such non-NPT states to be eligible to receive U.S. nuclear exports under a revised U.S. law, the President should be required to certify that the state:

- has provided public assurances that it will not test nuclear weapons;
- has provided public assurances that it will not produce fissile materials for nuclear weapons and is fulfilling that assurance;
- has placed under IAEA safeguards its civil nuclear facilities, including all nuclear power reactors and R&D facilities related to electricity generation;
- is playing an active and constructive role in helping address acute nuclear proliferation challenges posed by states of proliferation concern;
- has established, and is rigorously implementing, a national export control system that meets the highest international standards, including stringent rules and procedures banning unauthorized contacts and cooperation by personnel with nuclear expertise;
- has provided public assurances that it will not export enrichment or reprocessing equipment or technologies and is fulfilling that assurance;
- is working actively on its own and in cooperation with other countries in stopping illicit nuclear transactions and eliminating illicit nuclear commercial networks, including by fully sharing the results of any investigations of illicit nuclear activities; and
- is applying physical protection, control, and accountancy measures meeting the highest international standards to any nuclear weapons and to all sen-

sitive nuclear materials and installations, both military and civilian, on its territory.

These criteria could be written into U.S. law. They could also be adopted by the NSG as criteria for deciding, by consensus, whether a particular non-party to the NPT should be eligible for nuclear transfers from NSG member states. While such an approach would be country-neutral, it would enable both the U.S. Government and NSG members to distinguish among the non-parties to the NPT in terms of whether—and how soon—they would be eligible for nuclear cooperation.

Staunch supporters of the NPT can be expected to argue that these criteria do not go far enough—and that only NPT adherence should make a country eligible for nuclear cooperation. But it is unrealistic to expect India or the other non-parties ever to join the NPT, and continuing to insist on adherence as a condition for nuclear cooperation could forfeit the contribution to nonproliferation that steps short of NPT adherence could make.

Those who strongly favor the July 18th Joint Statement can be expected to argue that the criteria are too demanding and could result in India's walking away from the nuclear deal. But even the most demanding criterion—ending fissile material production—is a step India, in principle, supports and says it is willing to take when its minimum deterrence needs are satisfied. If India is prepared now to stop production, it could readily meet the remaining criteria. If not, the door would be open for India to walk through at a time of its own choosing.

The approach suggested here would clearly be less attractive to the Indians than the less demanding one that Bush Administration was prepared to settle for on July 18th. But it would be a major change from the status quo that has prevailed for decades, in which the door to nuclear cooperation for India and the other non-parties has been locked as a matter of law and policy.

In its ardent desire to transform U.S.-Indian relations, the Bush Administration has given too little weight to the damaging implications of its actions for the non-proliferation regime. The remedy should not be to reject the deal struck in July but to require that it be pursued in a way that enables the U.S. to advance its strategic goals with India as well as its nonproliferation interests—not serve one at the expense of the other.

Chairman HYDE. Thank you. Mr. Albright?

**STATEMENT OF MR. DAVID ALBRIGHT, PRESIDENT,
INSTITUTE FOR SCIENCE AND INTERNATIONAL SECURITY**

Mr. ALBRIGHT. Mr. Chairman and Congressman Lantos and Members of the Committee, it is an honor to testify today and I thank you for the invitation. At the heart of the nuclear commitments of the United States-Indian agreement is an Indian commitment to separate its civil and military nuclear programs. However, attempts to separate military and civil nuclear programs in the five acknowledged nuclear weapons states have been fraught with difficulty. In practice, the effective meaningful separation of these programs has required additional steps that are largely absent from the U.S.-India agreement. I would like to discuss several conditions currently absent from this agreement that are needed to insure that a real barrier exists between military and civil nuclear programs. Without these measures, it will be difficult to have confidence that the agreement will not cause serious damage to non-proliferation.

The first one is one Bob just mentioned, although I would say it a little more starkly. India should simply unilaterally cut off production of fissile material for nuclear weapons. All other acknowledged nuclear states have done that. India already has enough fissile material for its defense needs and does not need to produce more. We estimate it can make approximately 80 nuclear weapons from the material it has already produced.

A cap on production would help convince the United States and other countries that India has indeed adopted the global standards

of the international nonproliferation regime. To make this step more politically appealing, India should then call upon Pakistan to halt such production itself and negotiate at least a bilateral, verifiable halt in production. Without India halting production of fissile material for its nuclear weapons programs, nuclear weapons, particularly any in the areas involving the fuel cycle, would likely spill over into India's nuclear weapons programs.

Nuclear assistance to India should also be predicated upon India developing an adequate nuclear national export control system, fully consistent with international export control systems and mature national export control systems. Although India is developing export control laws and regulations, its current system lacks adequate enforcement and cannot stop the leakage of dangerous and nuclear related items. If India receives more nuclear and dual-use items, it can be expected, based on past experience, to increase its ability to sell similar items to others. It may inadvertently become a valuable source for proliferant states seeking nuclear weapons. Several countries including Iran, North Korea and perhaps, ironically, Pakistan would be expected to seek such items illicitly in India.

Compounding the development of effective export controls, India has a long history of illicitly acquiring items for its unsafeguarded nuclear facilities. India's elicited efforts are not as extensive as Pakistan's. Nonetheless, India's nuclear programs seek a variety of nuclear dual-use items from overseas suppliers without revealing fully and honestly that the end users are unsafeguarded nuclear facilities. In essence, India has created a system giving suppliers plausible deniability. For India to become a responsible member of the international community, it must stop any illegal or questionable overseas procurement. The Indian Government also needs to commit to instill a more responsible culture within the nuclear establishment and associated industries to reduce the chance of illicit nuclear trade.

United States and Indian officials have stated that all civil nuclear facilities would be safeguarded by the International Atomic Energy Agency and I commend them for that. A reasonable expectation is that India would also commit not to use these facilities for nuclear weapons or nuclear explosive purposes. The agreement, however, does not contain such an explicit commitment. Congress should insist upon such a commitment from India. In addition, the United States should insist that the IAEA safeguards applied to India are consistent with the application and intention of safeguards in non-nuclear weapons states. The safeguards in India should not undercut or weaken the effectiveness of safeguards in non-nuclear weapon states. One implication of this is that more facilities in India need to be safeguarded, particularly reprocessing and uranium enrichment facilities. I talk more about that point in my testimony.

However, India does have a large civil nuclear program and it will require extensive IAEA resources to safeguard. And if this deal is going to go forward, the IAEA should not have to fund the safeguards in India from its normal safeguards budget, which is already stretched too thin. India should provide the extra funding,

perhaps with the United States, necessary to safeguard its civil facilities.

Unfortunately, the remedies discussed above and by others may not be sufficient to provide the United States a net benefit from the nuclear rated portion of this agreement. I would like to join the voices of others, particularly the Chairman, that Congress needs to answer the many troubling questions raised by this deal before it considers changing long-standing, nonproliferation laws which, as Bob has stated, we are the leader. And if we pull our finger out of the dike, we do not know what is going to happen.

Certainly Congress should resist any attempt by the Administration to seek changes in law quickly or without proper congressional and public oversight. Thank you.

[The prepared statement of Mr. Albright follows:]

PREPARED STATEMENT OF MR. DAVID ALBRIGHT, PRESIDENT, INSTITUTE FOR SCIENCE AND INTERNATIONAL SECURITY

The agreement announced on July 18, 2005 by President George Bush and Prime Minister Manmohan Singh regarding the establishment of a "global partnership" aims to profoundly alter long-standing US non-proliferation laws and policies and dramatically increase nuclear commerce with India. Based on discussions with both US and Indian government officials, the agreement was negotiated quickly with little analysis of the implications for international nonproliferation measures that the United States historically has helped develop and strengthen, including the Nuclear Non-Proliferation Treaty (NPT), US and international export control policies, and International Atomic Energy Agency (IAEA) safeguards.

This agreement could pose serious risks to the security of the United States. If fully implemented, it could catapult India into a position as a major supplier of both nuclear and nuclear-related materials, equipment, and technology. With a weak and poorly enforced export control system, Indian companies could become major suppliers to the nuclear weapon programs of adversaries of the United States, in some cases possibly using technology which the United States originally provided. The United States may have already signaled to supplier nations previously constrained by US leadership that nuclear trade with their "friends" is permissible. This agreement may lead other major suppliers, such as Russia and China, to seek their own exceptions to long-standing non-proliferation rules. In addition, this agreement has diminished the value of the NPT and sent dangerous signals to Iran and North Korea.

Congress should conduct a thorough, public assessment of the costs and benefits of this agreement before modifying any US non-proliferation laws. It should also carefully monitor the actions of other supplier nations that may view this agreement as a long desired green light to weaken their own controls on the transfer of nuclear and nuclear-related equipment, materials, and technology to India and other nations, some of which are hostile to the United States.

At the heart of this agreement is an Indian commitment to separate its civil and military nuclear programs. The implication is that after such a separation, international civil nuclear commerce could proceed with India and would be prevented from spreading to the military sector. However, attempts to separate military and civil nuclear programs in the five internationally acknowledged nuclear weapon states, as defined by the NPT, have been fraught with difficulty. In practice, the effective separation of military and civil nuclear programs has required additional steps that are largely absent from the US/India agreement.

Based on experiences in other states, several conditions currently absent from the agreement are needed to ensure that a real barrier exists between military and civil nuclear programs. Without these measures, it will be difficult to have confidence that the agreement will not cause serious damage to nonproliferation.

Unilaterally Ending Production of Fissile Material for Nuclear Weapons

India should end its production of fissile material for nuclear weapons or nuclear explosive purposes, as has been done voluntarily and unilaterally by the five official nuclear weapon states. This step has been announced by the United States, United Kingdom, Russia, and France, and is understood to have been taken by China. India already has enough fissile material for its defense needs and does not need to produce more. A cap on production would help convince the United States and other

countries that India has indeed adapted the global standards of the international non-proliferation regime.

To make this step more politically appealing, India should then call upon Pakistan to halt such production and negotiate a bilateral, verifiable halt to production. The current commitment by India to work toward a universal FMCT is not sufficient as it is unlikely to be completed on a schedule consistent with the announced implementation goal for the US-India deal. Without India halting production of fissile material for its nuclear weapons programs, nuclear assistance, particularly any in the areas involving the fuel cycle, would likely spill over to India's nuclear weapons programs.

Implementing an Adequate Export Control System

Nuclear assistance to India should be predicated upon India developing an adequate national export control system fully consistent with the international export control system and mature national export control systems. Although India is developing export control laws and regulations, its current system lacks adequate enforcement and cannot stop the leakage of dangerous nuclear and nuclear-related items. Leakage could become an even greater problem if expanded international nuclear commerce allowed Indian companies to develop and sell more sophisticated and dangerous items.

If India receives more nuclear and dual-use items, it can be expected, based on past experience, to increase its ability to sell similar items to others. It may inadvertently become a valuable source for proliferant states seeking nuclear weapons. Several countries, including Iran, North Korea, and perhaps Pakistan, would be expected to seek such items illicitly in India with its weakly enforced export control laws. As was learned following the revelations about the Khan network, newer nuclear suppliers group (NSG) members supposedly in good standing were no match for determined proliferators. Helping ramp up India's ability to import and export nuclear dual-use items without an adequate national export control system is not in the interests of the United States or the non-proliferation regime.

Compounding the development of effective export controls, India has a long history of illicitly acquiring items for its own unsafeguarded nuclear facilities. Many of India's nuclear programs have depended on extensive foreign procurement for materials, equipment, and technology. Indian nuclear organizations use a system that hires domestic or foreign non-nuclear companies to acquire items for these nuclear organizations. Such procurement appears to continue for its secret gas centrifuge enrichment plant near Mysore. In an attempt to hide its true purpose from suppliers and others when it started this project in the 1980s, India called the facility the Rare Materials Plant (RMP) and placed it under Indian Rare Earths (IRE) Ltd, an Indian Department of Atomic Energy company focused on mining and refining of minerals. Since the mid-1980s, IRE has served as a management company for RMP and appears to be the declared end-user of its procurements of centrifuge-related equipment and materials.

India's illicit efforts are not as extensive as Pakistan's efforts, which involve well-coordinated national organizations aimed at acquiring a wide range of items while systematically disguising the true end use of the items. Nonetheless, Indian nuclear programs seek a variety of nuclear dual-use items from overseas suppliers without revealing fully and honestly that the end users are unsafeguarded nuclear facilities. In essence, India has created a system giving suppliers plausible deniability. If the supplier does not actively work to determine the end-user, then it would not know that the item was going to a nuclear facility or program.

For India to become a responsible member of the international community, it must stop any illegal or questionable overseas procurement. The Indian government also needs to commit to instill a more responsible culture within the nuclear establishment and associated industries to reduce the chance of illicit nuclear trade.

Safeguarding India's Civil Nuclear Facilities

US and Indian officials have stated that all civil nuclear facilities would be safeguarded by the IAEA. A reasonable expectation is that India would also commit not to use these facilities for nuclear weapons or nuclear explosive purposes. The agreement, however, does not contain such an explicit commitment. Congress should insist upon such a commitment from India.

India may want similar considerations as the five nuclear weapon states. These states accept IAEA safeguards voluntarily, but in general offer no commitments not to use such facilities for nuclear weapons purposes. Granting India the same safeguards conditions as the nuclear weapon states would make this agreement worthless.

In addition, the United States should insist that IAEA safeguards applied in India are consistent with the application and intention of safeguards in non-nuclear weapon states. The safeguards should not only verify an Indian commitment not to use these facilities and contained items for nuclear weapons purposes, but they should not undercut or weaken the effectiveness of safeguards in non-nuclear weapon states.

Toward this goal, the US should insist that the RMP, India's main uranium enrichment plant, should be placed under safeguards and committed to non-nuclear explosive purposes. Based on open sources, this facility appears to be dedicated mainly to producing highly enriched uranium for naval reactors, including a prototype land reactor and planned submarine reactors. Exempting the RMP facility from safeguards could undermine efforts to safeguard such facilities in non-nuclear weapon states. Brazil accepted safeguards on its enrichment plants at Aramar dedicated to the production of naval reactor fuel. Safeguards applied in India should be consistent with the IAEA's approach in Brazil.

Because India has a large nuclear program and many facilities not designed for the application of safeguards, applying safeguards in India would require extensive IAEA resources. The IAEA should not have to fund safeguards in India from its normal safeguards budget, which is already stretched too thin. India should provide the extra funding necessary to safeguard its civil facilities.

As a cost-saving measure, the focus of safeguards should be Indian reprocessing and uranium enrichment facilities, the main facilities able to produce weapons-usable nuclear material. In addition to the RMP enrichment plant, India has at least two reprocessing facilities that would be expected to be listed as civil sites, one at Tarapur and the other at Kalpakkam.

Policing the Barrier Separating Civil and Military Nuclear Programs

India's extensive military and civil nuclear programs are often connected, sharing personnel and infrastructure. In addition, some facilities currently have both a military and civilian purpose.

Even in the best of circumstances, the barrier between a military and civilian program can be porous. With increased nuclear assistance, India's military nuclear facilities could more easily acquire dual-use items through reverse engineering of items received at civil facilities or through other types of manipulation of export control laws. Expertise gained in a more advanced civil program could be easily transferred to a weapons program.

To combat such transfers, India needs to create domestic legislation banning the transfer of materials, equipment, and technology from its civil to military programs.

Limiting Dual-Use Exports to India

Because India will continue to operate a nuclear weapons program, the United States and other major suppliers will need to continue prohibiting exports to certain Indian facilities. It would be irresponsible to provide Indian nuclear weapons facilities with dual-use items that enable India to make more sophisticated nuclear weapons. As a result, members of the NSG will need India to provide assurances that it will not try to obtain items for its nuclear weapons facilities from abroad. In addition, these suppliers will need a complete list of facilities involved in India's nuclear weapons program.

Conclusion

Unfortunately, the remedies discussed above and by others may not be sufficient to provide the United States a net benefit from the nuclear-related portions of this agreement. Congress needs to answer the many troubling questions raised by this deal before it considers changing long-standing non-proliferation laws. At least, Congress should slow down any attempt by the administration to seek changes in law quickly or without proper Congressional and public oversight.

In addition, Congress may need to start worrying about the long term damage already done to the nuclear non-proliferation regime since this agreement was announced. It should carefully monitor the actions of other supplier nations that may view this agreement as signaling a US acceptance of weakened controls on the transfer of nuclear and nuclear-related equipment, materials, and technology to India and other nations, some of which are hostile to the United States.

Chairman HYDE. Thank you, Mr. Albright. Mr. Sokolski?

STATEMENT OF MR. HENRY SOKOLSKI, EXECUTIVE DIRECTOR, NONPROLIFERATION POLICY EDUCATION CENTER

Mr. SOKOLSKI. Mr. Chairman, I understand you are a Cubs fan?

Chairman HYDE. Currently, I am flip-flopping. I am a Sox fan today.

Mr. SOKOLSKI. I can tell you, as a University of Chicago graduate student, I spent many, many hours learning in the bleachers and I can just say, it is good to see you are coming around.

Chairman HYDE. I remember when it was 50 cents to sit in the bleachers.

Mr. SOKOLSKI. Well, I am not quite that old, but it was \$1.50.

Chairman HYDE. Back in the days of Queen Victoria. [Laughter.]

Mr. SOKOLSKI. In any case, by the way, I think Congress should look at the White Sox and think long and hard about how incapable they are of having an impact on important things like this deal. You do make a difference, you should know that and you should be much more vocal than you have been about what is coming down the pike. I just think you need to start speaking up. I will come back to that in my testimony.

I would ask for the forbearance of the Committee that I could place three items in the record. One is a study that my center is releasing today and I will speak to briefly. It is about the Indian ICBM program by Dr. Richard Speier, who used to work for me in the Department of Defense. And the other is a matching set of view graphs which give pictures to the words that are in the testimony and numbers, which are useful to think about when you are talking about nuclear weapons and space launch vehicles.

My general recommendation to you today is that Congress should authorize nuclear cooperation with India, but only after New Delhi commits to the restrictions that other responsible, advanced nuclear states have done themselves. Congress should do this by amending the Atomic Energy Act to allow U.S. nuclear cooperation with non-NPT states if, and only if, they meet five minimal conditions. First, they must forswear producing fissile materials for military purposes and, if they have a nuclear arsenal, forswear increasing the net number of nuclear weapons in their arsenal. Such states would also have to pledge eventually to dismantle their nuclear arsenals as have all other NPT weapon states, that is, the United States, that is China, that is Russia, France and the U.K. We are essentially saying, yeah, you have to meet those standards, the ones we meet.

Second, they must identify all reactors supplying electricity, all research reactors claimed to be for peaceful purposes, all spent fuel that these reactors have produced and all fuel making plants supplying these reactors as being civilian and, therefore, subject to routine, compulsory international inspections.

Third, they must uphold all previous bilateral nuclear non-proliferation obligations they might have had with the U.S. and other countries.

Fourth, they must publicly adopt the principals of the Proliferation Security Initiative and finally, they must be free of any U.S. nuclear or nuclear capable missile sanctions for at least 2 years and have cleared up any outstanding sanctionable actions before U.S. cooperation is formalized. I will not get into it, but no one should be voting on anything until they get a briefing from the intelligence community on what India is doing. It is my understanding, without getting into classified information, that you will

not have a briefing that consists of nothing. It will be a very interesting briefing, I can assure you, and you need to get it. There are actions insured that may be still actionable and pending with regard to U.S. laws, which you need to investigate.

Those in a hurry to seal the nuclear and space deals with India will object to these conditions, but insisting on them is both necessary and consistent with the agreement reached July 18. After all, both the United States and India agree that the United States would not regard India as a nuclear weapons state under the NPT and you heard Mr. Joseph say that September 8. As such, the IAEA inspections India will to allow of its civilian nuclear facilities can be much tighter, and ought to be much tighter, than the voluntary spot checks done of Russia, the United States, China, France and the U.K. Also, at the time both United States and Indian officials agreed that India would assume those restraints that advanced responsible nuclear states already had. Among the most important of these is foreswearing the expansion of ones nuclear arsenal, by renouncing the further production of fissile material for military purposes and capping the net number of military weapons one has.

Under these conditions, one could possess nuclear weapons, modernize them, or dismantle them, as the United States, Russia, U.K. and France have all done; but that would be it. It should be noted that demanding these conditions is more than merely desirable. They must all be met. These are minimal criteria if the deal's backers claim that these deals with space and nuclear cooperation are really going to enhance the case of global nonproliferation. In this regard, I want to associate myself with the comments made by everyone previously.

The United States and allied efforts, after all, that curb proliferation in Iraq, Iran and North Korea, have actually depended on having these rules. We use them for justifying our tough stand against these countries. The NPT bargain of giving up nuclear weapons to secure international civilian nuclear cooperation has also been critical to securing Libya's voluntary agreement to give up its nuclear activities in South Africa's and the Ukraine's surrender of their arms. They did it, they claim, not because of U.S. pressure, but because they had signed the NPT and they were going to be compliant with it.

In the Indian case, things are different. We will allow it to hold onto its nuclear weapons, but the whole world is watching as to what the conditions will be. The United States and its allies certainly have an interest in making India behave more like the U.K. and Japan than it does having it behave like China or Iran.

More than a few of the deal's backers, of course, believe that to enhance United States security against a hostile China, we should not press these points too hard. They are even willing to let the United States indirectly help India build more nuclear weapons. In this view graph submission to the Committee, you will see that the numbers are quite significant. Twelve uranium bombs or 75 plutonium bombs a year could be displaced by us just sending lightly enriched uranium to cover the Tarapur reactor's requirements. That is not nothing, that is significant.

They recognize that United States enriched reactor fuel sales will free up India's uninspected nuclear plants to focus entirely on making bombs. Some openly argue that this is necessary. They also seem unconcerned that United States space launch cooperation might directly help India build its first ICBM. This study that I am releasing today details their ICBM program, which is not required to hit any targets in China. They already have a rocket that they are working on to cover those targets. The ICBM, when it was last justified by Indian officials, was claimed to be targeted against Europe and the United States. We need to pay attention to this.

The indifference or realism of the deal's backers, I think, reflects unwarranted defeatism. Certainly the last thing in anyone's security interest is to help India compete against China with nuclear arms. China has five to ten times the number of deployed nuclear weapons as India and hundreds more advanced medium and intercontinental ballistic missiles. Although China no longer makes fissile material for weapons, it has stockpiled thousands of additional weapons' worth of highly enriched uranium and separated plutonium. It has shied from converting this material into bombs for fear of sparking a rivalry with Japan, who could also go nuclear by bolting the NPT and militarizing its own massive stockpile of separated plutonium. To be sure, the current Indian Government is not interested in dramatically ramping up Indian nuclear weapons or ICBM production, but its opponents clearly are. And if you read the Indian press, it is quite interesting, starting with the BJP. If they were to return to power and no cap was placed on India's nuclear weapons efforts, more Indian weapons would be likely built, which in turn could provoke China into a self-defeating nuclear arms rivalry that would not only promote more competition between India and Pakistan, but between China, Japan and the United States.

As for U.S. cooperation in space, the safest, most cost effective approach would be to make affordable launch capabilities in the United States accessible to India. Transferring satellite integration and space launch technology to India, on the other hand, is a sure-fire way to repeat the frightening developments of the 1990s, when United States satellite launch integration assistance literally boosted China's ICBM modernization efforts.

For this and all the other reasons noted, the House and the Senate should make clear to its leadership and the Executive that any enabling legislation should not be placed on any omnibus spending bill. Moreover, I think it is quite important that Congress make its views on this particular agreement known before the Administration finalizes its negotiation with India.

I think you need to weigh in because you will have a legislative role in changing the law. If it was just the Executive exercising its treaty-making power, then I would not say that. But they are asking you to change the law, so you need to weigh in before they preempt your legislative power.

[The prepared statement of Mr. Sokolski and material submitted for the record follows:]

PREPARED STATEMENT OF MR. HENRY SOKOLSKI, EXECUTIVE DIRECTOR,
NONPROLIFERATION POLICY EDUCATION CENTER

Mr. Chairman, members of the committee, I want to thank you for asking me to testify on the nonproliferation impact of the U.S.-India nuclear and space cooperation deals announced July 18, 2005. Unlike the many other mutually favorable deals announced July 18, 2005, these two, if not properly clarified by Congress, are fraught with danger. We certainly should be in no rush to get their implementation wrong. My general recommendation to you today is that Congress should authorize implementing these agreements' only after India commits to the limits other responsible, advanced nuclear states have assumed. This should be done in a country-neutral fashion by properly amending the Atomic Energy Act of 1954 to allow U.S. nuclear cooperation with advanced, responsible nuclear states that are not members of the Nuclear Nonproliferation Treaty (NPT) if they meet certain minimal criteria. In specific, Congress should delay endorsing such cooperation until any such state

1. forswears producing fissile materials for military purposes or, if it has a nuclear arsenal, increasing the net number of nuclear weapons it currently possesses, which would allow modernization but not expansion of any existing nuclear arsenal. Such weapons states would also have to pledge eventually to dismantle their nuclear arsenals as all other NPT weapons states have.

2. identifies all reactors supplying electricity to its distribution grid, all research reactors claimed to be for peaceful purposes to be civilian, all spent fuel these reactors produced, and all fuel making plants supplying these reactors to be subject to routine, compulsory International Atomic Energy Agency (IAEA) inspections

3. upholds all previous bilateral nuclear nonproliferation obligations with the US and other countries

4. publicly adopts the principles of the PSI

5. is free of any US nuclear or nuclear-capable missile proliferation sanctions for at least two years and clears up any outstanding sanctionable actions before US nuclear cooperation is formalized.

To be sure, insisting on these requirements will initially displease those in a hurry to seal the nuclear and space deals with India. Yet, in no way would insisting on such conditions move the goalposts or raise the bar on the agreement reached July 18, 2005. At the time, both the U.S. and India agreed that the U.S. would not regard India as a nuclear weapons state under the NPT. The U.S. insisted on this. As such, whatever IAEA inspections India agreed to of its civilian nuclear facilities need not be as loose as the voluntary spot checks Russia, the U.S., China. France and the UK are allowed.

Also, at the time, both U.S. and Indian officials agreed that India would assume all those restraints that "advanced, responsible nuclear states" already had assumed. Among the most important of these is forswearing the expansion of one's nuclear arsenal by renouncing the further production of fissile material for military purposes and capping the net number of nuclear weapons one has. Under these conditions, one could possess nuclear weapons, modernize them, or (as the U.S., Russia, UK and France, have done) dismantle them, but that would be it. It should be noted that demanding that these conditions is more than merely desirable. The must be met if, as the deal's backers have claimed repeatedly, the nuclear and space deals are to enhance the cause of global nonproliferation and U.S. security. The U.S., after all, has an interest in making India behave as the U.K. and Japan does, not as China or Iran.

Unfortunately, India has yet to express interest in meeting these conditions. Nor has the Bush administration pushed very hard to secure them. This all might be acceptable to Congress. If so, Congress need only endorse the loose nuclear inspections arrangements India and the Executive Branch are currently negotiating and approve legislation to relax US Atomic Energy Act and missile technology controls in the sole case of India. But Congress should understand that if it does this, it will put the US in the dubious position of

1. *helping India expand its nuclear weapons arsenal* by freeing up nuclear fuel making capacity that otherwise would be needed to supply civilian reactors, such as those at Tarapur, with lightly enriched uranium (see viewgraph 5).

2. *lending technical support to India's intercontinental ballistic missile (ICBM) project*, a n incredibly massive, inherently vulnerable, first-strike missile derived directly from its civilian satellite launch system (the Polar Space Launch Vehicle). India already has a medium-range missile, the Agni, which it is upgrading to reach all of China and can be made road and rail-mobile. Indian officials and the CIA, meanwhile, claim India's ICBM is intended to deter Europe and the U.S. (see viewgraphs 6, 7, and 8 and NPEC's newly released study by Dr. Richard Speier).

3. *undermining U.S. and international efforts to restrict nuclear and missile technology exports* to states such as North Korea and Iran by giving such help to a state that has not yet signed the NPT, capped its nuclear weapons program, rectified proliferation transactions that are sanctionable under U.S. law, endorsed the Proliferation Security Initiative's principles, or placed all of its nuclear activities under compulsory IAEA nuclear inspections as all responsible, advanced nuclear states have (see viewgraph 4).

For most people, avoiding these pitfalls would be worth considerable effort. Yet, more than a few of the deals' backers cynically believe that encouraging these developments is necessary to enhance U.S. security against a hostile China or Iran. This, however, reflects an unwarranted, panic-driven defeatism in dealing with China that is unworthy of the U.S. More important, it is strategically misguided in regarding India and cooperation with the U.S. on at least three critical counts:

1. *India's Foreign Secretary and Prime Ministers are insistent India's July 18th understandings with the U.S. are not "directed against any third country."* In fact, India struck a strategic agreement with Iran in January 2003 known as the New Delhi Declaration not only to help develop Iranian oil and gas fields, but to assure continued cooperation with Iran against the Taliban in Afghanistan, many of whom threaten the peace in Kashmir. Indian officials also are insistent that India's vote on Iranian IAEA noncompliance was cast to help prevent referral to the UN. As for China, the current Indian government sees economic cooperation with Beijing as a key to India's future development.

2. *The last thing in anyone's security interest is to help India compete against China with nuclear arms.* China has five to ten times the number of deployed nuclear weapons as India. Although it no longer makes fissile materials for weapons, it has stockpiled thousands of additional weapons' worth of highly enriched uranium and separated plutonium. It has shied from converting all of this material into bombs for fear of sparking an arms rivalry with the U.S. and Japan, who could go nuclear by bolting the NPT and militarizing its own massive stockpile of separated plutonium. To be sure, the current Indian government is not interested in dramatically ramping up Indian nuclear weapons production. Its main opponents, the BJP, however, clearly are. If they were to return to power and no cap had been placed on India's nuclear weapons efforts, more Indian weapons would likely be built, which, in turn, could provoke China and a revived, self-defeating nuclear arms rivalry, not only between India and Pakistan, but between China, Japan, and the U.S.

3. *Every rupee India invests in developing nuclear weapons, ICBMs, and missile defense is one less that will otherwise be available to enhance security cooperation with the U.S. in the imperative areas of anti-terrorism, intelligence sharing, and maritime cooperation in and near the Indian Ocean.* India's entire annual military budget of about \$20 billion (which supports a military of over 1.3 million active duty soldiers) is roughly what the U.S. spends on its nuclear arsenal and missile defenses alone. Encouraging India to spend in these areas could easily hollow out its conventional military in the very areas most promising for U.S.—Indian cooperation.

This then brings us to the weakest and least credible arguments for pushing nuclear and space cooperation on an urgent basis and that is that India must have substantial U.S. cooperation in these fields immediately to sustain its economic growth. In fact, for the near-term just the reverse is the case. As is detailed in the viewgraph submission to this committee (see viewgraphs 9 through 16), investing in the expansion of nuclear power in India for the next decade is the very least leveraged way to address India's growing need for more and cleaner energy. Instead, at least the next decade, one should focus on increasing efficiencies in India's consumption, distribution, and generation of energy (including but not limited to its electrical sector). This would entail transitioning to cleaner uses of coal and restructuring India's coal industry to meet demand; introducing market mechanisms and curbing massive energy theft and subsidies; and expanding the use of renewable energy, e.g., biomass, small hydro, wind, etc., (both connected and unconnected to the grid). So long as the Indian nuclear sector continues to be preoccupied with extremely complicated thorium-fuel cycle systems and breeder reactors and relies on dysfunctional state secrecy and monopoly style management, investing in this energy sector will be self-defeating. Instead, the U.S. and others should encourage India's nuclear sector to acquire a more reasonable set of goals and open itself up to foreign ownership and management. This will take several years.

As for space cooperation in the space launch area, by far the safest, most cost-effective form of cooperation would be to make affordable U.S. launch capabilities more accessible to India. Certainly, the recent announcement that the U.S. intends to include Indian astronauts in upcoming U.S. space shuttle missions is the proper path to take. Transferring satellite integration and space launch technology to India, on the other hand, is a sure-fire way to repeat the frightening development

that Loral and Hughes produced in the 1990s with China when their satellite launch integrate assistance literally boosted China's ICBM modernization efforts.

For this and all the other reasons noted above, Congress should exercise due diligence in sorting out the specifics of U.S.—Indian nuclear and space cooperation. Both Houses should make it clear to its leadership and the Executive that any enabling legislation to implement U.S.-India space and nuclear cooperation must be referred to the appropriate committees rather than rushed on any legislative spending vehicle. Congress and the appropriate committees also should make their own views known on what legislative conditions they believe the proper implementation of nuclear and space cooperation with India and similar non-NPT states require. In this regard, it would be desirable for Congress to voice its legislative views before the Executive finalizes its negotiations with India. Under no circumstances, should Congress allow itself to be rushed.

India's ICBM – On A “Glide Path” to Trouble?

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A Policy Research Paper

by

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Introduction

A glide path is the gentle course that an airplane follows as it descends to a safe landing. If the plane encounters an unexpected development, it can divert, regain altitude, and change its course.

Because India has been developing nuclear weapons and missiles to deliver them, United States-Indian technology relations have for many years remained up in the air, not heading for a safe landing. After four years of Bush Administration negotiations the U.S. now describes its technology relations with India as being on a “glide path”.

This paper addresses the question whether, in view of India’s abundantly-reported intercontinental ballistic missile (ICBM) development, we should divert from our present “glide path” approach to space cooperation.

On October 3, 2003, the Washington Post questioned Secretary of State Powell about the latest diplomatic developments with India.

QUESTION: ...last week, President Bush presented [Prime Minister Atal Bihari] Vajpayee with what was called, like, a “glide path” toward better relations....

SECRETARY POWELL: ...there was a basket of issues that they were always asking us about called, well, we called it -- we nicknamed it, “The Trinity.” How could you help us? How can we expand our trade in high tech areas, in areas having to do with *space launch activities*, and with our nuclear industry?...we also have to protect certain red lines that we have with respect to proliferation, because it’s sometimes hard to separate within space launch activities and industries and nuclear programs, that which could go to weapons, and that which could be solely for peaceful purposes....And the “glide path” was a way of bringing closure to this debate.¹

Nearly two years later, President Bush and the Indian Prime Minister confirmed this cooperation in a joint statement.

...the two leaders resolve...Build closer ties in space exploration, satellite navigation *and launch*, and in the commercial space arena....²

As this cooperation was being negotiated and agreed, reports persisted that India was preparing to produce an ICBM. These reports had been accumulating for over two

1. <http://www.washingtonpost.com/wp-dyn/articles/A41977-2003Oct3.html>. Italics added for emphasis.

2. The White House, Office of the Press Secretary, July 18, 2005, “Joint Statement Between President George W. Bush and Prime Minister Manmohan Singh,” available at <http://usinfo.state.gov>. Italics added for emphasis.

decades.³ The latest public report appeared less than six weeks after the presidents' joint statement.⁴

Over the last decade the reports have been consistent in avering that the ICBM will be called "Surya" and that hardware and technology for the ICBM will come from India's gigantic Polar Space Launch Vehicle (PSLV).

What are the capabilities of the ICBM, and why does India want it? How did India acquire the space launch vehicle technology for the weapon? And how did the United States come to ride a "glide path" to space launch cooperation with India? These topics will be covered in turn.

India's ICBM -- what and why

In 1980s India adapted a space launch vehicle, the SLV-3, to become the Agni medium-range ballistic missile. In keeping with India's practice of describing nuclear and missile programs as civilian until their military character could not be denied, India originally claimed that the Agni was a "technology demonstrator". The Agni program now consists of three missiles with ranges, respectively, of upwards of 700, 2000, and 3000 kilometers.

India may have officially begun the Surya project (also sometimes known as Agni IV) in 1994.⁵ Reports cite various dates perhaps because the project has several decision points. Reports generally agree that the Surya program, like the Agni program, will result in missiles with various ranges.

- o Surya-1 will have a range of about 5,000 kilometers.⁶
- o Surya-2 from 8,000 to 12,000 kilometers.
- o Surya-3 up to 20,000 kilometers.

3. For early reports see *Islamic Defence Review* Vol.6/No.4, 1981; Maurice Eisenstein, "Third World Missiles and Nuclear Proliferation," *The Washington Quarterly*, Summer 1982; "Liquid Fuel Engine Tested for PSLV", *Hindustan Times*, New Delhi, December 13, 1985, p.1; "Growing Local Opposition to India's Proposed National Test Range at Baliapal, Orissa," *English Language Press*, October 1986; and "India faces rising pressure for arms race with Pakistan", *Christian Science Monitor*, March 9, 1987, p.1.

4. Madhuprasad, "Boost to Indian Armed Forces' Deterrence Arsenal; India to Develop Intercontinental Ballistic Missile", *Bangalore Deccan Herald in English*, August 25, 2005.

5. Vivek Raghuvanshi, "Indian Scientists Poised To Test-Launch Country's First ICBM", *Defense News*, April 30, 2001, p.26

6. International missile nomenclature defines as ICBM as a ballistic missile with a range of 5,500 or greater. However, Indian commentators have tended to exaggerate their missiles' capabilities by bumping missiles into the next higher range classes.

Table 1 compares the Agni and Surya families of missiles.

Table 1

THE AGNI AND SURYA MISSILE FAMILIES⁷

<u>Missile</u> lxd (m)	<u>Size</u> (km)	<u>Range</u>	<u>Mobile?</u>	<u>Probable Target</u>
Agni-1	15x1	700-1000+	yes	Pakistan
Agni-2 3000+	20x1	2000-	yes	China
Agni-3 or 13x1.8	20x1 5000+	3000-	yes	China
Surya-1	~35x2.8	~5000	no	China
Surya-2 12000	~40x2.8	8000-	no	United States
Surya-3	40+x2.8	20000	no	Global

Reports agree that the Surya will have the option of a nuclear payload -- and sometimes the claim is made that the payload will consist of multiple nuclear warheads.

Reports generally agree that the Surya will be a three-stage missile with the first two Surya stages derived from PSLV's solid-fuel rockets. India obtained the solid-fuel

7. The low-end figures for the Agni family are commonly reported. The high-end figures are more uncertain. In the case of Agni-3, the high-end figures may relate to later Agni models or even to the Surya. Surya lengths are approximations based on the lengths of the PSLV and GSLV missile stages.

technology for the SLV-3 and the PSLV from the U.S. in the 1960s.⁸ The third Surya stage is to use liquid fuel and will be derived either from the Viking rocket technology supplied by France in the 1980s (called Vikas when India manufactured PSLV stages with the technology) or from a more powerful Russian-supplied cryogenic upper stage for the Geosynchronous Space Launch Vehicle (GSLV), which is an adaptation of the PSLV.

If -- as reported -- the Surya uses PSLV rocket motors, it will be an enormous rocket with solid-fuel stages 2.8 meters (about nine feet) in diameter and a total weight of up to 275 metric tons. This will make it by far the largest ICBM in the world -- with a launch weight about three times that of the largest U.S. or Russian ICBMs.

There appears to be no literature on Indian plans to harden or conceal the Surya launch site or to make the missile mobile, any of which would be difficult to do because of the missile's size and weight. If a cryogenic third stage is used, the launch process will be lengthy. This means that the Surya is likely to be vulnerable to attack before launch, making it a "first-strike" weapon that could not survive in a conflict. Indeed, the Surya's threatening nature and its pre-launch vulnerability would make it a classic candidate for preemptive attack in a crisis. In strategic theory this leads to "crisis instability", the increased incentive for a crisis to lead to strategic attacks because of each side's premium on striking first.

Why would India want such a weapon? The reported ranges of the Surya variants suggest the answer.

o A 5,000-kilometer Surya-1 might overlap the range of a reported 5,000-kilometer upgrade of the Agni missile.⁹ Surya-1 would have only one advantage over such an upgraded Agni. That advantage would be a far larger payload -- to carry a large (perhaps thermonuclear) warhead or multiple nuclear warheads. India has no reason to need a missile of "ICBM" range for use against Pakistan. 5,000 kilometers is arguably an appropriate missile range for military operations against distant targets in China. As illustrations of the relevant distances, the range from New Delhi to Beijing is 3,900 kilometers, from New Delhi to Shanghai 4,400 kilometers, and from Mumbai to Shanghai 5,100 kilometers.

8. Gary Milhollin, "India's Missiles - With a Little Help from Our Friends," Bulletin of the Atomic Scientists, November 1989, available at <http://www.wisconsinproject.org/countries/india/misshelp.html> and Sundara Vadlamudi, "Indo-U.S. Space Cooperation: Poised for Take-Off?", The Nonproliferation Review, Vol.12, No.1, March 2005, p.203.

9. Moscow Agentstvo Voyennykh Novostey internet news service in English, 1252 GMT November 1, 2004; and a publication of more uncertain quality, Arun Vishwakarma, "Agni - Strategic Ballistic Missile", April 15, 2005, available at <http://www.bharat-rakshak.com/MISSILES/Agni.html> It is possible that either or both of these references have conflated the Surya-1 the Agni program.

o An 8,000-to-12,000-kilometer Surya-2 would be excessive for use against China. However, the distance from New Delhi to London is 6,800 kilometers, to Madrid 7,400 kilometers, to Seattle 11,500 kilometers, and to Washington, D.C., 12,000 kilometers. An Indian Defence Research and Development Organisation (DRDO) official wrote in 1997, "Surya's targets will be Europe and the US."¹⁰

o A 20,000-kilometer range Surya-3 could strike any point on the surface of the Earth.

Indian commentators generally site two reasons for acquiring an ICBM: To establish India as a global power and to enable India to deal with "high-tech aggression" of the type demonstrated in the wars with Iraq.¹¹ Because there is no obvious reason for India to want a military capability against Europe, there is only one target that stands out as the bullseye for an Indian ICBM -- the United States.

How India got here

The established path to a space launch capability for the U.S., the Soviet Union, the U.K, France, and China was to adapt a ballistic missile as a space launch vehicle. India turned the process around, adapting a space launch vehicle as a ballistic missile. If Brazil, Japan, or South Korea were to develop long-range ballistic missiles, they would probably follow India's example.

President Kennedy was once asked the difference between the Atlas space launch vehicle that put John Glenn into orbit and an Atlas missile aimed at the Soviet Union. He answered with a one-word pun, "Attitude". Paul Wolfowitz is said to have compared space launch vehicles to "peaceful nuclear explosives" (PNEs); both have civilian uses but embody hardware and technology that are interchangeable with military applications. India has demonstrated this interchangeability with both space launch vehicles and PNEs.

The path to India's ICBM capability took more than four decades.

o Early 1960s: NASA trains Indian scientists at Wallops Island, Virginia, in sounding rockets and provided Nike-Apache sounding rockets to India.¹² France, the UK, and the Soviet Union also supply sounding rockets.¹³

o 1963-64: A.P.J. Abdul Kalam, an Indian engineer, works at Wallops Island where the Scout space launch vehicle (an adaptation of Minuteman ICBM solid-fuel rocket technology) is flown.¹⁴

10. Wilson John, "India's Missile Might", The Pioneer in English, New Delhi, July 13, 1997, p.1, available as FBIS-TAC-97-195 BK1407155097, July 14, 1997

11. For example, Brahma Chellaney, "Value of Power", The Hindustan Times in English, May 19, 1999

12. Vadlamudi, op cit.

13. Milhollin, op cit.

- o 1965: Upon Kalam's return to India the Indian Atomic Energy Commission requests U.S. assistance with the Scout, and NASA provides unclassified reports.¹⁵
- o 1969-70: U.S. firms supply equipment for the Solid Propellant Space Booster Plant at Sriharikota.¹⁶
- o 1973: India tests a "peaceful nuclear explosion".
- o 1970s: A.P.J. Abdul Kalam becomes head of the Indian Space Research Organisation (ISRO), in charge of developing space launch vehicles.
- o 1980: India launches its first satellite with the SLV-3 rocket, a close copy of the NASA Scout.¹⁷
- o February 1982: Kalam becomes head of DRDO, in charge of adapting space launch vehicle technology to ballistic missiles.
- o 1989: India launches its first Agni "technology demonstrator" surface-to-surface missile. The Agni's first stage is essentially the first stage of the SLV-3. Later, the Agni becomes a family of three short-to-intermediate-range ballistic missiles.¹⁸
- o 1990: Russia agrees to supply India with cryogenic upper stage rockets and technology. The U.S. imposes sanctions on Russia until, in 1993, Russia agrees to limit the transfer to hardware and not technology. However, India claims it has acquired the technology to produce the rockets on its own.
- o 1994: India launches the PSLV. Stages 1 and 3 are 2.8 meter-diameter solid-fuel rockets. Stages 2 and 4 are liquid-fuel Vikas engines derived from French technology transfers in the 1980s.
- o 1994: This is the earliest date for which the Surya ICBM program, using PSLV technology, is reported to have been officially authorized. However, India's space and missile engineers -- if not the "official" Indian government -- had opened the option much earlier.

14. Ibid.

15. Ibid.

16. Vadlamudi, op cit.

17. Alexander Pikayev, Leonard Spector, et al., Russia, the US and the Missile Technology Control Regime, Adelphi Paper 317, International Institute for Strategic Studies, March 1998.

18. Robert Norris and Hans Kristensen, "India's nuclear forces, 2005", Bulletin of the Atomic Scientists, Vol.61, No.05, September/October 2005, available at http://www.thebulletin.org/article_nn.php?art_ofn=so05norris.

- o 1998: India tests nuclear weapons after decades of protesting that its nuclear program was exclusively peaceful.
- o 1999: India flies the Agni II, an extended range missile that tests reentry vehicle “technology [that] can be integrated with the PSLV programme to create an ICBM” according to a defence ministry official.¹⁹
- o 1999: Defense News cites Indian Defence Research and Development Organisation (DRDO) officials as stating that the Surya is under development.²⁰
- o November 6, 1999: India’s Minister of State for Defence (and former head of DRDO) Bachi Singh Rawat says India is developing an ICBM known as Surya that would “have a range of up to 5,000 km”.²¹
- o November 23, 1999: Rawat is reported to have been stripped of his portfolio after his ICBM disclosure.²²
- o 2001: Khrunichev State Space Science and Production Center announces that it will supply five more cryogenic upper stages to India within the next three years.²³
- o 2001: The cryogenic engine is reported to be “the Surya’s test-bed”.²⁴
- o 2001: A U.S. National Intelligence Estimate states, “India could convert its polar space launch vehicle into an ICBM within a year or two of a decision to do so.”²⁵
- o 2004: A Russian Academy of Sciences Deputy Director states that India is planning to increase the range of the Agni missile to 5,000 kilometers and to design the Surya ICBM with a range of 8,000 to 12,000 kilometers.²⁶

19. V.G. Jaideep, “India Building ICBM with 8,000-Plus Km Range”, The Asian Age in English, February 8, 1999, pp.1-2 and Barbara Opall-Rome, “Agni Test Undercuts U.S., Angers China”, Defense News, April 26, 1999, p.17.

20. Vivek Raghuvanshi, “India To Develop Extensive Nuclear Missile Arsenal”, Defense News, May 24, 1999, p.14.

21 Canadian Security Intelligence Service, “Ballistic Missile Proliferation”, Report # 2000/09, March 23, 2001, available at http://www.csis-scirs.gc.ca/eng/misdocs/200009_e.html.

22. Iftikhar Gilani, “Premature Disclosure of ICBM Project, Rawat Stripped of Defence Portfolio”, New Delhi, November 23, 1999.

23. Moscow (Interfax), “Khrunichev Space Center To Supply Rocket Boosters To India”, April 16, 2001, available at <http://spacer.com/news/india-01d.html>

24. Cf. footnote 6.

25. National Intelligence Estimate, “Foreign Missile Developments and the Ballistic Missile Threat Through 2015”, December 2001, available at http://www.cia.gov/nic/special_missilethreat2001.html

26. Cf. footnote 9.

o 2005: According to Indian Ministry of Defence sources, there are plans to use the non-cryogenic Vikas stage for the Surya and to have the missile deliver a 2-1/2 to 3-1/2 metric ton payload with two or three warheads with explosive yields of 15 to 20 kilotons.²⁷

The common threads in all these reports are that space launch vehicle technology is the basis for the Indian ICBM, and that India obtained the technology with foreign help.

How the United States got here

The U.S. has a policy against missile proliferation, but the policy has not been in place as long as the Indian missile program. Nor has the policy been consistently applied. Some markers:

- o 1970s: The U.S. begins to consider a broad policy against missile proliferation.²⁸
- o 1980s: The U.S. and its six economic summit partners secretly negotiate the Missile Technology Control Regime (MTCR). After 1-1/2 years of difficult negotiations on the question of space launch vehicles, all partners agree that they must be treated as restrictively as ballistic missiles because their hardware, technology, and production facilities are interchangeable. The MTCR is informally implemented in 1985 and is publicly announced in 1987.²⁹
- o 1990: Two weeks after the U.S. enacts a sanctions law against missile proliferation, the Soviet Union announces its cryogenic rocket deal with India. The two parties are the first to have sanctions imposed on them under the new law.³⁰
- o 1993: The U.S. and Russia agree that Russia may transfer a limited number of cryogenic rocket engines to India, but not their production technology.³¹
- o 1998: India tests nuclear weapons. U.S. imposes broad sanctions on nuclear and missile/space-related transfers.
- o 1999: Kalam says he wants to “neutralise” the “stranglehold” some nations had over the MTCR that had tried, but failed, to “throttle” India’s missile program. “I would like

27. Madhuprasad, op cit.

28. Richard Speier, The Missile Technology Control Regime: Case Study of a Multilateral Negotiation, manuscript funded by the United States Institute of Peace, Washington, D.C., November 1995.

29. Speier, ibid.

30. Pikayev, et al, op cit.

31. Ibid.

to devalue missiles by selling the technology to many nations and break their stranglehold.”³²

o September 22, 2001: U.S. lifts many of the technology sanctions imposed in 1998. Subsequently, India’s Prime Minister visits the U.S. amid agreement to broaden the technology dialogue.³³

o 2002: Kalam becomes President of India.

o 2002: The U.S. tells India it will not object to India launching foreign satellites, as long as they do not contain U.S.-origin components.³⁴

o April 2003: The last mention of India is made in the Director of Central Intelligence’s unclassified semi-annual report to Congress on the acquisition weapons of mass destruction. Future reports delete descriptions of India’s activities.³⁵

o October 2003: Secretary of State Powell speaks to the Washington Post about the “Trinity” and the “glide path”.³⁶

o January 2004: President Bush agrees to expand cooperation with India in “civilian space programs” but not explicitly to cooperate with space launches. This measure is part of a bilateral initiative dubbed “Next Steps in Strategic Partnership”.³⁷

o July 2005: President Bush agrees to cooperate with India on “satellite navigation and launch”. The Prime Minister of India agrees to “adherence to Missile Technology Control Regime...guidelines.”³⁸

The common thread in these developments is that the U.S. clarity about the relationship between space launch vehicles and missile proliferation appears close to being obscured in the case of India. India’s agreement to adhere to the MTCR’s export control

32. “Agni IRBM ‘Built to Carry Nuclear Warhead”, Jane’s Defence Weekly, April 28, 1999.

33. Vadlamudi, op cit., is an excellent source for recent developments in the U.S.-Indian space dialogue.

34. C. Raja Mohan, “US Gives Space to ISRO”, The Hindu in English, September 30, 2002, p.11.

35. Director of Central Intelligence, “Unclassified Report to Congress on the Acquisition of Technology Relating to Weapons of Mass Destruction and Advanced Conventional Munitions, 1 January Through 30 June 2002”, posted April 2003, available at <http://www.cia.gov>.

36. Cf. footnote 2.

37. The White House, Office of the Press Secretary, Statement by the President on India, “Next Steps in Strategic Partnership with India”, January 12, 2004, available at <http://www.whitehouse.gov/news/releases/2004/01/20040112-1.html>

38. Cf. footnote 3.

guidelines is a welcome development but does not entitle India to missile (or space launch vehicle) technology. Without India's adherence, if India were to export missile technology restricted by the MTCR, it would be a candidate for the imposition of sanctions under U.S. law.

Analysis

The story of India's ICBM illustrates short-sightedness on the parts of both India and the United States. If India completes the development of an ICBM, the following consequences can be expected:

- o An incentive to preempt against India in times of crisis,
- o A diversion of India's military funds away from applications that would more readily complement "strategic partnership" with the U.S.,
- o Increased tensions and dangers with China,
- o Confusion and anger on the part of India's friends in Europe and the United States,
- o A backlash against India that will hinder further cooperation in a number of areas, and
- o A goad to other potential missile proliferators and their potential suppliers to becoming more unrestrained.

The governments of India and the United States have nothing to be proud of in this business. In seeking to become a global power by acquiring a first-strike weapon of mass destruction the Indian government is succumbing to its most immature and irresponsible instincts. The U.S. government, by offering India the "Trinity" of cooperation, is flirting with counterproductive activities that could lead to more proliferation.

There are, of course, arguments in favor of such cooperation:

- o Strategic cooperation with India is of greater value than theological concerns about proliferation.
- o India has already developed nuclear weapons and long-range missiles, so resistance to such proliferation is futile.
- o And India is our friend, so we need not worry about its strategic programs.

It is true that there is considerable value to strategic cooperation with India. But nuclear and space launch cooperation are not the only kinds of assistance that India can use. It has a greater use for conventional military assistance, development aid, and access to economic markets. Moreover, nonproliferation has a strategic value at least as great as that of an Indian partnership. A little proliferation goes a long way. It encourages other

nations (such as Pakistan, Brazil, Japan, South Korea, and Taiwan) to consider similar programs. And the example of U.S. cooperation encourages other suppliers to relax their restraint.

It is true that India has already developed nuclear weapons and long-range missiles. But India has a long way to go to improve their performance, and it has a history of using nuclear and space launch assistance to do just that. Some areas in which India can still improve its missiles are

- o Accuracy. For a ballistic missile, accuracy deteriorates with range. India's ICBM could make use of better guidance technology, and it might obtain such technology with "high-tech" cooperation with the U.S.
- o Weight. Unnecessary weight in a missile reduces payload and range. Or it forces the development of gigantic missiles such as India's PSLV-derived ICBM. India is striving to obtain better materials and master their use to reduce unnecessary missile weight.³⁹
- o Reliability. India's space launch vehicles and medium range missiles have suffered their share of flight failures. Engineering assistance in space launches could improve India's missile reliability -- as was demonstrated with unapproved technology transfers incident to launches of U.S. satellites by China.⁴⁰
- o Multiple warheads. India's reported interest in missile payloads with multiple nuclear warheads means that certain elements of satellite technology may get diverted to military use. Deliberate or inadvertent transfers of technology associated with dispensing and orienting satellites could, as in the Chinese case, make it easier to develop multiple re-entry vehicles.

Countermeasures against missile defenses. Assistance to India in certain types of satellite technology, such as the automated deployment of structures in space, could aid the development of penetration aids for India's long-range missiles. Given that the U.S. is the obvious target for an Indian ICBM, such countermeasures could stress U.S. missile defenses.

Supplier restraint can slow down India's missile progress and make such missiles more expensive and unreliable -- perhaps delaying programs until a new regime takes a fresh look at them and considers deemphasizing them. Apart from the technical assistance that the U.S. is considering supplying, the relaxation of U.S. objections to foreign use of India launch services will augment the ISRO budget for rocket development. Even if India

39. Mir Ayoob Ali Khan, "Agni-III to get light motor for bigger bombs", *The Asian Age* in English, New Delhi, October 14, 2005.

40. The "Cox Commission" Report, House of Representatives Report 105-851, "Report of the Select Committee on US National Security and Military/Commercial Concerns with the People's Republic of China", June 14, 1999, available at <http://www.access.gpo.gov/congress/house/hr105851/>.

were not materially aided by U.S. space launch cooperation, the example is certain to kindle hopes in such nations as Brazil that they can get away with the same tactics. And France and Russia, India's traditional and less-restrained rocket technology suppliers, are certain to want a piece of the action.

It is true that India is our friend and "strategic partner", at least at the present time. History raises questions whether such friendship would continue through a conflict with Pakistan. And India's interest in an ICBM, which only makes sense as a weapon against the U.S., raises questions whether the friendship is mutual. Moreover, nonproliferation policy is often directed against programs in friendly nations. Argentina, Brazil, Israel, Pakistan, South Africa, South Korea, Taiwan, and Ukraine are all friendly nations for which the U.S. has attempted to hinder WMD and missile programs without undermining broader relations. An exception for India is certain to be followed by more strident demands for exceptions elsewhere. Is the space-launch component of "friendship" worth a world filled with nations with nuclear-armed missiles?

India's missile program has evolved over more than four decades. The history of proliferation demonstrates the difficulty of holding to a strong nonproliferation policy over years, let alone decades.⁴¹ There will always be temptations to trade nonproliferation for some bilateral or strategic advantage of the moment. In the current situation, India may have out-negotiated the U.S. After India's 1998 nuclear weapon tests, the U.S. imposed sanctions and then gradually lifted them. In nuclear and rocket matters, this was not enough for India. And once the U.S. began easing up on India, the U.S. kept easing up.

The U.S. professes to be holding to its "red lines" -- in Secretary of State Powell's words -- in whatever kind of cooperation it is considering. But the world needs to know where these lines are when it comes to "space launch" cooperation. It is one thing for the U.S. to provide launch services for Indian satellites. It is another thing for the U.S. to use or help improve India's ICBM-capable rockets. Are the "red lines" firm or flexible? Is the "glide path" a slippery slope? This brings us to this paper's recommendations.

Recommendations

Under the July 18, 2005 joint statement, the U.S. and India committed themselves to "build closer ties in space exploration, satellite navigation and launch, and in the commercial space arena". This does not require nor should it encourage U.S. cooperation on India's ICBM program directly or indirectly. In fact, the U.S. has already taken a step in the right direction by offering to launch Indian astronauts in upcoming space shuttle missions and to involve them to the fullest extent in the International Space Station

The U.S. should do more to encourage India to launch its satellites and science packages on U.S. and foreign launchers by making these launches more affordable. The U.S. also

41. Richard Speier, United States Strategies Against the Proliferation of Mass Destruction Weapons, doctoral dissertation, Massachusetts Institute of Technology, 1968.

should be forthcoming in offering India access, as appropriate, to the benefits of U.S. satellite programs -- including communications, earth resource observation, and exploration of the cosmos. India, in fact, has some of the world's best astrophysicists and cosmologists. It is in our interest, as well as the world's, that we make all of the data from our space observation programs involving the Hubble telescope and similar systems available to Indian scientists to analyze.

1) *Do not be naive about the nature of India's program.*

After more than two decades of reports about India's interest in an ICBM -- including reports from Russia, statements on India's ICBM capability by the U.S. intelligence community, and the firing of an Indian official after he publicly described the Surya program -- there should be no illusions. *All* of the reports state that India's ICBM will be derived from its space launch vehicle. The U.S. should not believe that it is possible to separate India's "civilian" space launch program -- the incubator of its long-range missiles -- from India's military program. There should be no illusions about the target of the ICBM. It is the United States -- to protect India from the theoretical possibility of "high-tech aggression". The U.S. intelligence community's semi-annual unclassified reporting to Congress on India's nuclear and missile programs was discontinued after April 2003. This reporting should be resumed.

2) *Do not assist India's space **launch** programs.*

The U.S. should not cooperate either with India's space launches or with satellites that India will launch. India hopes that satellite launches will earn revenues that will accelerate its space program -- including rocket development. U.S. payloads for Indian launches -- such as the envisioned cooperative lunar project -- risk technology transfer (see recommendation #3) and invite other nations to be less restrained in their use of Indian launches. Because there is no meaningful distinction between India's civilian and military rocket programs, the U.S. should explicitly or *de facto* place ISRO back on the "entities" list of destinations that require export licenses.⁴² Certainly, Congress should insist that the U.S. explain its "red lines" regarding space cooperation with India. If these lines are not drawn tightly enough, Congress should intervene.

3) *Review carefully any cooperation with India's satellite programs.*

India is reportedly developing multiple nuclear warheads for its long-range missiles. If India develops an ICBM, the next step will be to develop countermeasures to penetrate U.S. missile defenses. Certain satellite technologies can help India with both of these developments. The U.S. should review its satellite cooperation to ensure that it does not

42. U.S. Department of Commerce, "Control Policy: End-User and End-Use Based", Export Administration Regulations, Part 744, available at <http://www.access.gpo.gov/bis/ear/pdf/744.pdf> ISRO was removed from the "entities" list under a U.S.-Indian agreement signed on September 17, 2004. See Vadlamudi, *op cit*.

aid India inappropriately in the technologies of dispensing or orienting spacecraft, of automated deployment of structures in space, or of other operations that would materially contribute to multiple warheads or countermeasures against missile defenses.

Conclusion

The target of an Indian ICBM would be the United States. The technology of an Indian ICBM would be that of a space launch vehicle. The U.S. should not facilitate the acquisition or improvement of that technology directly or indirectly. In this matter, U.S. clarity and restraint are what the world -- and India -- need.

Backing the U.S. - India Nuclear Deal and Nonproliferation: What's Required

Testimony By
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Presented before a Hearing of
The House Committee on International Relations
"The U.S.-India 'Global Partnership' The Impact on Nonproliferation"
Rayburn House Office Building, Room 2172
Washington, DC 20515
October 26, 2005

1

Key Concerns Driving the US - Indian Nuclear Cooperation Debate

- **A desire to recognize India as a nuclear weapons state outside of the NPT** and allow civilian nuclear cooperation with it to promote some level of normality in our relations and to encourage some level of nonproliferation restraint.
- **An abhorrence of rewarding India** for making nuclear weapons outside of the NPT (and contrary to legal pledges made to the US) and of helping India make more nuclear weapons

2

The Way to Address Both Contentions

Amend the US Atomic Energy Act of 1954 to require US nuclear cooperation with advanced, responsible nuclear states (including, but not necessarily limited to India) to require that the recipient do as most responsible, advanced nuclear weapons states already do – uphold the key nonproliferation rules and renounce the further quantitative expansion of their nuclear arsenal either by increasing the net size of their nuclear bomb arsenal or by producing more military fissile.

3

Balance of This Brief

Proceeding with nuclear and missile technology cooperation without such restraints will

- undermine nonproliferation rules in an unprecedented fashion
- Effectively enable India to make many more bombs and longer range missiles sooner

Although getting India to agree to these restraints may take time, we and India can easily afford to take this time from

- A strategic perspective
- An energy perspective

4

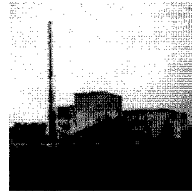
After India: The Proliferation Fallout

- **After the deal's announcement**
 - PRC rejects getting tough on DPRK or Pakistan as “double standard nonproliferation”
 - Pakistan, (perhaps Israel later) demand equal treatment
 - UK offers to discuss nuclear help to Pakistan
 - Ukraine's president publicly stating that Ukraine's signing on to the NPT and surrender of nuclear weapons might have been a “mistake
 - Iran demands equal or better treatment from EU-3
 - UK, Canada, France, Australia, Japan given impression India is more important to US security than working with them
- **Possible future fallout**
 - NAM rejects any tightening of NSG, IAEA, or NPT on similar grounds in general or against Iran
 - PSI, which relies on NSG/NPT become less effective and popular

5

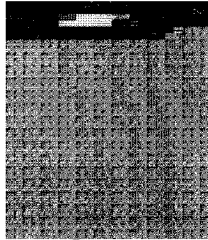
LWR Fuel Sales: Potential to Free Up India's Capacity to Make Bombs

- India has 3 enrichment plants, primarily dedicated to naval fuel/bomb production
- India says it can fuel Tarapur 1 and 2 but prefers not to
- US sales of “safeguarded” fuel for these reactors would free up either
 - ~ 24,000 swu of Indian enrichment/year, i.e., enough to make 12 HEU bombs annually, OR
 - ~75 crude bombs worth of plutonium that otherwise would be needed to fuel these reactors with Indian MOX



6

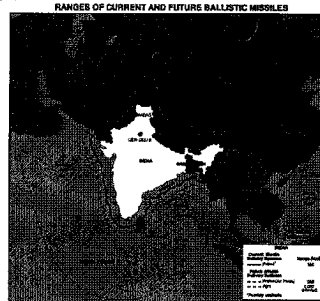
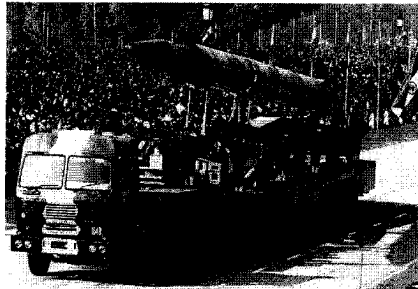
US Satellite Launch Technology: Help for India's ICBM Program



PSLV	is the basis for India's	Planned ICBM
2 solid, 1 liquid stage		same
290 tons		275 tons (nearly 3 times the size of America's largest ICBM)
multiple warheads		multiple satellites
		(2.8 km CEP)

7

Does India Need an ICBM: What's the Target?



Agni II (2,000 km range, pictured and mapped above)
 Agni III (3 stages, 3,500 -5,000 km range) soon to be tested, also rail and road-mobile

8

Is Encouraging Any of This in Anybody's Strategic Interest?

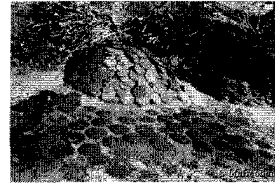
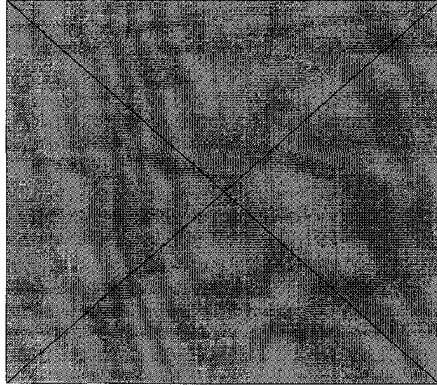
- U.S. officials claim Washington's preference is for India to stop making weapons and military fissile
- China has at least twice the fissile material as India does to make nuclear weapons (i.e., over 30 tons) and many times the number of deployed nuclear weapons
- Supporting or allowing any nuclear challenge or ambiguity from India to China risks not only prompting Pakistan to react, but China to make so many new nuclear systems, the US will have to respond
- The more India's spends on catching up with China and staying ahead of Pakistan's nuclear forces, the less it will be able to augment its conventional military and anti-terrorism efforts and to cooperate with the US on more important security imperatives – e.g., maritime and intelligence cooperation near the Pakistani boarder, in the Indian Ocean, and near and in the Gulf.

9

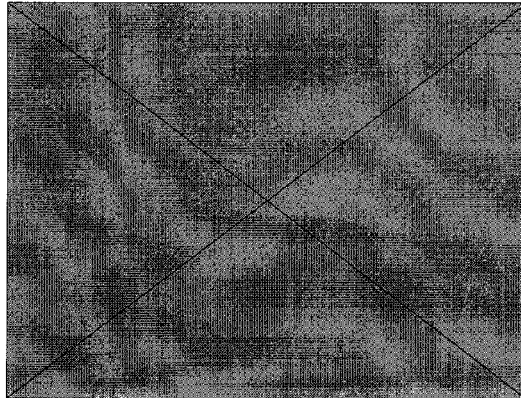
Nuclear Power: Least Leveraged to Address India's Immediate Energy Needs

- Roughly ½ of India's energy consumption comes from burning cow dung and wood, 1/3rd from oil burning (mostly for transport), and 1/5th from electricity
- Of India's currently installed electrical capacity, only 2.7 percent is nuclear, i.e., which produces roughly as much electricity as do renewables -- e.g., wind power, biomass, small hydro, etc.
- The rest of India's electricity is produced by burning coal (60-80%), natural gas (~10%) and furnace oil (~15%)
- India has the world's 3rd largest coal reserves but this sector is dominated by state ownership and management that is having difficulty mining and transporting quickly enough to meet demand

10
Indian Energy Consumption



11
Installed Indian Electrical Generating Capacity



12

Indian Nuclear Power Problems Go Well Beyond Immediate Lack of Fuel or Outside Help

- Indian nuclear officials insist India has enough natural uranium to complete bridge to thorium cycle, that costs of processing low concentration Indian ores is actually manageable
- Persistent program slippages, high expense, lack of private investment, technical difficulties, inconsistent capacity factors are unlikely to be amenable to any quick fix
- India can't meet its current three-phase nuclear program due to structural concerns and no amount of nuclear imports are likely to resolve this unless India gives up much or all of its original and rather ambitious nuclear plan of developing breeders for thorium cycle reactor systems



13

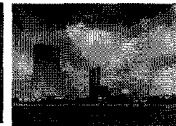
Most Immediate, Cost-effective Ways to Meet India's Energy Needs Are Nonnuclear

- In the electrical sector increase
 - efficiencies in generation (e.g., use of alternative systems, e.g., gas fired generators, to meet peak load demand) and in distribution
 - Curb widespread theft from the grid
 - End state offers of free/subsidized power to large farms and businesses
 - Restructure the state-run Indian coal industry to meet demand
- Indian energy experts project that over the next decade, modest energy efficiency measures alone could afford over 10 times more electricity than nuclear power currently does (i.e., 30,000 MWe)
- Develop new private sources of natural gas

14

Easiest, Most Leveraged Ways to Clean Up India's Increasing Energy Use Also Are Nonnuclear

- By far the most leveraged investments in reducing pollutants and greenhouse gases are
 - Reduce pollution (see opposite polluted lake) by substituting for dung and wood burning with decentralized, non-grid-delivered micro renewable power sources
 - establishing efficiency standards
 - Encourage increased energy efficiencies
- In the electrical sector
 - increased supply and use of private sector natural gas
 - Implementation of planned renewable increases (12,000 MWe or four times current installed nuclear capacity)
 - making coal burning much cleaner



15

Nuclear Power: Last Stop for Freeing Up India's Energy Sector

- Over the next decade, Indian planners anticipate adding 83 Gwe at a cost of \$143 billion that will require dramatic increases in foreign direct investment in, privatization of, and market discipline of India's energy sector. That said:
 - All sectors of India's energy industry are open to direct foreign investment **except** nuclear
 - All sectors of India's energy industry are open to local or private ownership **except** nuclear
 - Private investment has begun to be made in all sectors of India's energy industry **except** nuclear

16

Desired: Increased Reliance on Market Mechanisms

- Nonproliferation and the “invisible hand” of free markets and competition in India’s case compliment one another
- US in general should assist India’s development first of those energy sectors where private and foreign investment and competition are greatest and where the prospect of profits is clearest
- Use of similar economic criteria for nuclear transfers under the NPT and NSG to other states could also help fortify these rules
- The forced feeding of nuclear technology through governments to the India with guaranteed loans is a prescription for premature investments and waste

17

Nonproliferation Standards That Implementing Indian Nuclear Deal Should Meet

- Indian Foreign Secretary claims India will do no more and no less to restrain its nuclear program than other NPT nuclear weapons states
- Under Secretary Burns claims deal will advance the global cause of nonproliferation and that India has agreed to behave as most NPT weapons states and as other responsible, advanced nuclear states already do

18

US View of These Standards Must Differ from that of India

- Unlike most NPT weapons states, India believes it should be free to make as many weapons and as much nuclear weapons materials as it likes
- It also believes India should be treated as an NPT weapons state – i.e., like China – despite US 7/18 clarification that it is not such a state. It believes it is entitled to:
 - Voluntary safeguards on only a few reactors
 - Ability to change list at any time and to add only very slowly
 - Breeder reactor, spent fuel should not be covered

19

What Meeting These Standards Minimally Requires

- Declaring no more fissile military production (as UK, FR, Russia, and US already do)
- Identifying all reactors supplying electricity to India's grid, all research reactors claimed to be for peaceful purposes to be civilian, all spent fuel these reactors produced, and all fuel making plants supplying these reactors to be subject to routine IAEA inspections (as Germany, Japan do)
- Upholding all previous nonproliferation obligations with the US and others
 - Tarapur spent fuel cannot be reprocessed without prior US consent
 - CIRUS must be declared to be a civilian reactor for peaceful purposes
- Adopting the principles of the PSI (as has US, France, UK, Russia)
- Being free of any US nuclear or nuclear-capable missile proliferation sanctions for at least two years and clearing up any outstanding sanctionable actions.

20

Likely Indian Objections and Rejoinders

- **The US should constrain PRC equally**
 - PRC is an original weapons state under NPT
 - PRC nuclear build up makes it an irresponsible state
 - US and others restraining PRC should not preclude India from restraining itself, which is in its own interest
- **The US must cap Pakistan as well**
 - India should reach agreement with Pakistan on such restraints; the US and its friends are ready to help
- **The US. first must deliver on freeing up the NSG rules as it promised to do**
 - The US cannot make this happen without NSG consensus

21

What This Suggests About How Congress Should Proceed

- **Congress should deliberately determine which criteria India should meet as a “responsible, advanced nuclear state,” make these country-neutral criteria public now, and ask the Executive Branch to try to secure these diplomatically**
- **Congress should make clear that whatever the diplomatic outcome, it will require certification that these country-neutral criteria be met before proceeding to consideration of nuclear cooperative agreements with India or any other non-NPT state**
- **Congress should demand of its leadership and the White House that any enabling legislation be referred to the appropriate Congressional committees rather than rushed on any legislative spending vehicle**

Chairman HYDE. Thank you, Mr. Sokolski. Mr. Spector.

**STATEMENT OF MR. LEONARD SPECTOR, DEPUTY DIRECTOR,
MONTEREY INSTITUTE OF INTERNATIONAL STUDIES, CEN-
TER FOR NONPROLIFERATION STUDIES**

Mr. SPECTOR. Thank you, Mr. Chairman, for the opportunity to testify this morning, and thank you Congressman Lantos. I think all of us appreciate that the matter before us is quite weighty and that we do not want to change and alter existing U.S. law which has been in place for so many years. And the principle of requiring recipients of our exports to replace all of their facilities under international inspection unless there are compelling reasons and unless the individual country receiving these benefits is worthy of this special privilege.

I think there are several criteria that need to be employed as we decide whether India meets this standard. Some of them have been articulated by my colleagues and I will, in a sense, be echoing a number of their important remarks. First, there is no question that there must not be external proliferation by India. I think the record here looks pretty good, but we have just heard from Dr. Sokolski that there may be elements that deserve further attention.

Second, and this is a point that Bob Einhorn and others have made, we want more than mere "doing no harm." We want India to be a real partner and an advocate for nonproliferation. Here, again, I think we are seeing some progress, but it is not clear how far the Indians are prepared to go. The vote of the IAEA in September was significant, but it has been diluted by some of the information we are hearing after the fact regarding the basis for the vote and how the Indians are justifying it. So we want to see more about how India is going to assist us in that setting.

There is a third criterion, however, which I think has not really been discussed here except very briefly in Henry Sokolski's testimony and that is the need for the state itself that is going to receive this benefit from us, to have an unambiguous history of compliance with international nuclear agreements. Here, unfortunately, India's history is very difficult indeed.

As you know from reading what you have done and from a familiarity with the history, India has used a research reactor supplied by Canada as a peaceful use reactor, for the manufacture of nuclear weapons. That is widely understood and I think it is a central aspect of the Indian situation today. The situation here is not simply what occurred back in the 70s when not only was the reactor misused, but also heavy water that we had supplied, but also the fact that this is a continuing situation that currently contributes to the Indian nuclear weapons program.

I have in the footnotes to my written testimony some of the language from the original agreement which is explicit that the reactor was to be used for peaceful purposes only and the same was true for the heavy water we supplied. David Albright and others have listed precisely which facilities are being used now for the nuclear weapons program, and the CIRUS reactor features prominently. It may represent, let us say, a third, 25 percent, of the plutonium that is now available for nuclear weapons, all done in fundamental violation of the agreement with the Canadians.

Now there will be some counter arguments that we are going to hear. Certainly the Indians will say, "Well, the Canadians are not thumping the table on this one, but I do not think that is really the issue for us." What matters is that the question of whether or not the United States should undertake nuclear commerce with a country which is currently misusing old nuclear commerce, partly from us but principally from Canada. Is that an appropriate basis for going forward when this outstanding issue is still there? And this is not, you know, a secondary issue. This is front and center. This is in the nuclear weapon program itself.

It is clear the Administration would not consider nuclear sales to Iran for many reasons, but one of which is they are out of compliance with IAEA inspections. We would not consider dealing with North Korea because they violated, in the view of the Administration, the 1994 Agreed Framework. Well, the Indian behavior, although I do not want to make a comparison between these countries, but in this particular respect, the behavior of the Indian nuclear establishment is all too similar to the disregard shown by these other states for their international and nuclear commitments.

Now India is going to have to make a fundamental decision and all of us have alluded to this, whether individual reactors are treated as civil or military. If the CIRUS reactor is treated as a military reactor, that is India thumbing its nose at Canada and at the international community, taking what was previously, what was given as a peaceful reactor and then telling the world, "Nope, it is military." And there is simply no justification for that.

So I think what needs to be done is we need to press India to consider some means of rectifying this historical problem. I have proposed that they place the CIRUS reactor on the civilian list and that they allow IAEA inspections. And therefore, if the reactor itself is a peaceful-use reactor, we treat the plutonium it produced as peaceful-use plutonium and put that under inspection, as well. Colleagues that I have discussed this with all agree this is a bit of a stretch in a sense, but the offense that was perpetrated here is so direct and so well known that for the United States to go forward with nuclear commerce as though this was not part of the history, as though this was not an ongoing offense, I think would be a terrible mistake.

The most important recommendation I have to make today, however, is one that the Committee has already adopted, not because you heard it from me but because it is so embedded in the Committee's thinking. That is the need to proceed cautiously and clearly on this very delicate matter and to exercise the prerogatives of the Congress. This is going to be a very complex undertaking, change of laws, hearing about the negotiations. And I think we do not want to see a rush to judgment here. There is some talk about a legislation that may be working its way around the Senate that would somehow announce certain waivers for India immediately and then we would pick up the pieces, the details later on. I think that would be a terrible mistake and that we really need to proceed in a very deliberate fashion, as the Chairman and Congressman Lantos and others have said. Thank you, Mr. Chairman.

[The prepared statement of Mr. Spector follows:]

PREPARED STATEMENT OF MR. LEONARD SPECTOR, DEPUTY DIRECTOR, MONTEREY INSTITUTE OF INTERNATIONAL STUDIES, CENTER FOR NONPROLIFERATION STUDIES¹

Thank you, Mr. Chairman for the opportunity to testify on U.S. nuclear cooperation with India in the wake of the July 18, 2005, summit between President George W. Bush and Indian Prime Minister Manmohan Singh

I.

In understandings reached at that meeting, as you know, President Bush agreed to permit sales to India of U.S. civilian nuclear power equipment and materials, reversing twenty-five years of carefully wrought U.S. policy. That policy, known as the “full-scope safeguards” requirement, prohibits most U.S. nuclear commerce with states, like India, that are not recognized as nuclear weapon states under the nuclear Nonproliferation Treaty (NPT) and that refuse to place *all* of their nuclear activities under International Atomic Energy Agency (IAEA) inspection or “safeguards,” a step that precludes the use of the state’s nuclear facilities and materials for nuclear weapons. States refusing to accept such full-scope safeguards are either keeping open the option to develop nuclear weapons in the future or, like India, have actually used facilities not subject to IAEA monitoring to develop nuclear arms.

The full-scope safeguards requirement has two broad goals. It enshrines the principle that we should not contribute in any way to the nuclear weapon potential of states in this category, because capabilities acquired in the civilian nuclear sector can be all too easily transferred to nuclear weapon programs. Secondly, the rule has the effect of imposing a targeted economic sanction against states that keep open the option of developing nuclear arms (or that actually develop them) and, at the same time, provides an incentive for states to accept full-scope safeguards, for example, by joining the nuclear Nonproliferation Treaty (NPT).

It is important to remember that the *United States was one of the first countries to apply the full-scope safeguards requirement* to its civil nuclear exports, beginning in the late 1970s, and thereafter *we became its principal champion* in international fora, eventually persuading the Nuclear Suppliers Group (NSG) to adopt this rule in 1992.²

Thereafter, the United States devoted great diplomatic effort to ensure that Supplier Group members adhered to the rule in practice. During the 1990s, for example, the United States vehemently opposed attempts by Russia to bend narrow exceptions the rule so as to permit nuclear power plant sales to India.³ The Bush Administration, moreover, worked assiduously to bring China into the Nuclear Suppliers Group, persuading it, *inter alia*, to accept the group’s requirement that recipient states extend IAEA safeguards to all of their nuclear activities, a requirement that in China’s case will restrict future civilian nuclear transfers to Pakistan.⁴

I raise these points to underscore that for the United States to abandon this principle in the case of India represents a highly visible and far-reaching change of course that should only be taken for the most worthy states and only for the most compelling reasons. I believe that India does not meet these standards at this time. However, if certain aspects of the U.S.-India understanding regarding civilian nuclear transfers can be implemented effectively, this calculation might change.

II.

To be worthy of benefiting from a modification of current U.S. law, which, to reiterate, conditions U.S. civil nuclear transfers on a recipient’s accepting IAEA inspections on all of its nuclear activities, I believe a state must meet *three conditions*.

¹The views expressed in this testimony are those of the author. The Monterey Institute Center for Nonproliferation Studies does not take positions on policy questions as a corporate entity.

²The Nuclear Suppliers Group now has 44 member states. Members voluntarily agree to apply a uniform set of rules in making nuclear exports. These are embodied in the Nuclear Supplier Group Guidelines, which contain lists of exports to be controlled and rules governing export licensing decisions, including the full-scope safeguards requirement. See <http://www.nuclearsuppliersgroup.org/>

³Eventually Russia backed down on sales beyond two reactors whose transfer, it argued, was agreed to before the NSG rule was adopted in 1992.

⁴Indeed, in negotiations with China over this point, the Bush Administration obtained China’s agreement that China’s civil nuclear transfers to Pakistan would be limited to completion of one additional nuclear power plant at Chasma, pursuant to a contract China and Pakistan signed before China joined the NSG. U.S. Assistant Secretary of State for Nonproliferation John Wolf stated, “We would prefer that no such cooperation occur.” See “Congress Questions U.S. Support for China Joining Nuclear Group,” *Arms Control Today*, June 2004. http://www.armscontrol.org/act/2004_06/China.asp (accessed October 22, 2005)

- *First, the state in question must have a strong record of not contributing to proliferation by other nations.* Publicly available information suggests that India may largely meet this requirement today, although it will be important for the Committee to verify that the classified record of India's compliance with international export control norms is also satisfactory. If India were to explicitly adopt the export control standards of the Nuclear Suppliers Group and the Missile Technology Control Regime (MTCR) as contemplated under the U.S.-India understandings of July, India would take an important step forward that would reinforce its commitment to future export restraint. It may be pointed out, however, that totally apart from its understandings with the United States, India is already legally obligated to implement measures of this kind by UN Security Council Resolution 1540, adopted in April 2004, requiring states to enact and enforce effective WMD export control measures (and effective measures to control WMD materials domestically).⁵
- *Second, the state should be required to demonstrate that it is actively working with us to halt proliferation elsewhere.* India is definitely moving in this direction, as seen by its September 24, 2005, vote at the IAEA to declare that Iran is not in compliance with its IAEA safeguards obligations because of its pursuit of an undeclared uranium enrichment capability. I would stress that Russia and China abstained on this vote, so India's decision to condemn a violation of international nonproliferation rules is a noteworthy and very positive step. However, the true test of Indian commitment to international nonproliferation norms will come when a decision at the IAEA must be made to refer Iran's noncompliance to the UN Security Council. Sadly, judging from the way the Singh administration is portraying India's IAEA vote at home, it is unlikely that India will be prepared to stand with us when the crucial test comes at the IAEA later this year.⁶
- There is a third standard, however, that a state must also meet, in my view, before it can be considered for a waiver of 25 years of restrictive U.S. nuclear transfer policy: *the state must have an unambiguous record of compliance with its civil nuclear transfer agreements.* As all of us in this room who are familiar with the history of the Indian nuclear weapons program know, India does not meet this test.

Indeed, at this very moment, I consider India to be violating a core international commitment applying to civilian nuclear transfers it has received, by using restricted plutonium for its nuclear weapons program. In fact, it may be disregarding more than one such commitment.

Why would the United States consider opening civil nuclear cooperation with a state that has a clear history of abusing agreements covering such transfers? How could it be confident that India would abide by its agreements in the future?

When Under Secretary Burns declared that "India has not been a proliferator,"⁷ he told only part of the story. He focused only on India's external behavior—not on that country's misuse at home of civilian nuclear technology it had received in the past.

⁵ UN Security Council Resolution 1540, "Nonproliferation of Weapons of Mass Destruction," April 28, 2004, http://www.un.org/Docs/sc/unscl_resolutions04.html (accessed October 22, 2005). The Bush Administration deserves credit for championing this important initiative and gaining its approval by the UN Security Council.

⁶ India's long-standing opposition to the nuclear Nonproliferation Treaty adds to the significance of its decision help the United States to enforce the treaty's requirements against Iran. Unfortunately, India's history of disregarding nonproliferation undertakings, discussed below, undercuts the moral authority of its vote.

⁷ See "Administration To Seek Congress' Support for Nuclear Pact; State Department's Burns Praises India's Record on Nonproliferation," Press Briefing by Under Secretary of State for Political Affairs, <http://usinfo.state.gov/sa/Archive/2005/Jul/20-858577.html> (accessed October 22, 2005). The context for Secretary Burns's comment is as follows:

"UNDER SECRETARY BURNS: One of the factors by which we judge the performance of other countries is to look at the record of commitment to nonproliferation. And if you look at what India has done as it's developed its civil nuclear power sector, its economy and how it's treated fissile material, other sensitive materials and nuclear technologies, India has not been a proliferator. India has not sold or transferred those materials and equipment to third parties that do not have them. India has been responsible. And India has now opened itself up to a degree of transparency that assures us that this agreement can be verified and will be verified. There's a significant amount of trust between India and the United States, but there's also verifiability in this agreement."

III.

“India chose to totally disregard its commitments to Canada and, in 1974, detonated a nuclear device using plutonium reprocessed from spent fuel from the CIRUS reactor.”

—Canadian Department of Foreign Affairs and International Trade
<http://www.dfait-maeci.gc.ca/nndi-agency/non-proliferation-en.asp> (accessed October 22, 2005)

“The NSG was created following the explosion in 1974 of a nuclear device by a non-nuclear-weapon State, which demonstrated that nuclear technology transferred for peaceful purposes could be misused.”

—“History of the NSG,” from the organization’s official website, <http://www.nsg-online.org/history.htm> (accessed October 22, 2005)

India’s misuse of plutonium produced in the Canadian-supplied CIRUS research reactor is not a matter of ancient history; it is an ongoing offense. The original transgression took place in the 1970s, when India misused the reactor, along with U.S.-supplied heavy water that was essential for the reactor’s operation, in order to produce the plutonium for India’s 1974 nuclear detonation.

India had pledged to Canada and the United States that the reactor and heavy water, respectively, *together with any plutonium produced through their use*, would be used for peaceful purposes only.⁸ The offense is continuing today because, as David Albright points out in his testimony, a significant fraction of the plutonium *currently* used in the Indian nuclear arsenal was produced in CIRUS. While India cynically proclaimed in 1974 that its nuclear test was a “peaceful nuclear explosion” and therefore did not violate its agreements with Canada and the United States, India has since made absolutely clear that its nuclear explosives today are nuclear *weapons*.⁹ Thus there is no possible way to justify this use of CIRUS-origin material as consistent with India’s “peaceful use” pledges.

India and its champions will put forward a smokescreen of arguments to counter the assertion that India is currently violating an international nuclear transfer agreement and that this should be a bar to renewed U.S. nuclear cooperation.

- Canada, they will argue, has not raised the CIRUS problem as an objection to the proposed new U.S.-India nuclear deal.

But Canada’s views are not the key issue. What matters is whether the United States should undertake nuclear trade with a known violator of civil nuclear agreements—and, as the Canadian government website quoted above makes clear, Canada most certainly believes that India cheated on its commitments.

The Administration would not consider nuclear sales to Iran, for example, because of its non-compliance with IAEA inspections, and on this basis, it is strongly urging Russia to halt construction of a nuclear power plant now nearing completion in Bushehr. Moreover, the Administration ended U.S. support for the development of a nuclear power plant in North Korea, once it concluded that Pyongyang was not complying with the 1994 U.S.-North

⁸The operative language in the Indo-Canadian Agreement states: “Article III. The Government of India will ensure that the reactor and any products resulting from its use will be employed for peaceful purposes only.” Agreement on the Canada-India Colombo Plan Atomic Reactor Project, April 28, 1956. <http://meaindia.nic.in/treatiesagreement/1956/chap131.htm> (accessed October 22, 2005).

The operative language in the Indo-U.S. heavy water contract states, “9. The Government agrees that neither this Agreement nor any Interest thereunder shall be assigned. The heavy water sold hereunder shall be for use only in India by the Government in connection with research into and the use of atomic energy for peaceful purposes, and shall be retained by the Government, or by other parties authorised by the Government to receive it, and not resold or otherwise distributed.” Agreement and between the United States Atomic Energy Commission and the President of India, March 16, 1956. http://www.nci.org/a/1956_d20.htm. I would like to express my appreciation to Paul Leventhal and the Nuclear Control Institute for making this document available.

The reactor and heavy water were supplied before bilateral or IAEA inspections became a norm for nuclear commerce, and thus the reactor has never been subject to IAEA monitoring.

The current status of U.S. heavy water is not known. It may have been exhausted or a portion of the original charge could still be in CIRUS. India has never provided an accounting to the United States of the disposition of the material.

⁹In 1997, it should be added, AP reported that the individual leading the testing group in India in 1974, Dr. Raja Ramanna, declared during an address in western India, “The Pokhran test was a bomb, I can tell you now.” AP, October 10, 1997, New Delhi. This statement was brought to my attention by Paul Leventhal, founding president of the Nuclear Control Institute.

Korea Agreed Framework. Although one hesitates to place India in the same category as Iran and North Korea, the behavior of the nuclear establishments of the three states is all too similar.

- India will also argue that its agreement with Canada over CIRUS is no longer in force and therefore no longer controls the plutonium created in the reactor.

But that means India believes that a reactor obtained one day under a guarantee of exclusively peaceful use can later be turned to military use, as if the guarantee had never been given. Does the United States want to bend long-standing international nonproliferation rules to engage in nuclear trade with a state taking such a position, a state that takes cover behind a legalism to shield its misappropriation of highly sensitive nuclear technology? Is this a paragon we wish to champion to the world as a model of behavior worthy of special treatment?¹⁰

Even if the United States could somehow obtain a double-ironclad guarantee in a new agreement for cooperation with India, specifying that Indian pledges of non-explosive use of our future transfers would continue “in perpetuity.” I am not sure we could be confident that India would stand by these pledges, given this history. Opening nuclear trade with India must be based not only on exquisite legal drafting, but also on underlying trust that India is a credible nuclear trading partner.¹¹

IV.

India will soon be forced to show its true colors regarding the CIRUS reactor and the plutonium the facility has produced. In his understanding with President Bush, Prime Minister Singh agreed to identify India’s nuclear facilities as civilian or military, and voluntarily to place the former under IAEA inspection. How will the Indian government characterize CIRUS?

Will India thumb its nose at Canada, and the wider international community, and baldly renounce all restrictions on the facility by declaring it to be a military installation, or will India demonstrate to the world that it is, indeed, respectful of international nonproliferation norms and list CIRUS as a civilian facility?

It is also necessary to look not only at the future use of CIRUS, but also to address the plutonium produced by the reactor over the years. If CIRUS is declared civilian because of the terms under which it was provided, then presumably the peaceful-use pledge would cover the plutonium it generated, and this would need to be sequestered apart from India’s military stockpile and placed under IAEA monitoring.¹²

V.

I noted earlier that India may be transgressing a second nuclear trade agreement. I have in mind its agreement with Canada covering the Rajasthan Atomic Power Station, whose nuclear power reactors were supplied by Canada.¹³ Those reactors are under IAEA safeguards, and there have been no concerns about the misuse of the plutonium produced in them.

However, India has replicated these reactors and is now operating eleven additional Canadian-style reactors—two at Kaiga, two at Kakrapar, two at Kalpakkam, two at Narora, two at the Rajasthan Atomic Power Station (in addition to the original two supplied by Canada), and one at Tarapur. These facilities are not under

¹⁰The Canada-India agreement on CIRUS has no termination date.

¹¹This said, any future agreement for cooperation with India must include facility-specific, in-perpetuity IAEA safeguards coverage. See Frederick McGoldrick, Harold Bengelsdorf, and Lawrence Scheinman, “The U.S.-India Deal: Taking Stock,” *Arms Control Today*, October 2005.

¹²It may be whispered that it is unrealistic to expect India to give up such an important element of its nuclear weapons capability at this time and, indeed, that it is not in the interest of the United States to press it to do so.

I would reply that, in fact, India would *gain* strategically from this approach because the country would quiet critics of its nuclear posture and establish itself as a genuinely responsible advanced nuclear state, with strong nonproliferation credentials, locking in improved nuclear trade ties with the United States that would more easily endure beyond the current Administration. India’s reduced stocks of plutonium would still be ample for a minimum deterrent and, most likely, the number warheads it could develop from these stocks would be in rough balance with the number of the strategic delivery systems it has fielded. U.S. nonproliferation policy, moreover, can hardly be founded on promoting the enlargement of nuclear arsenals based upon disregard for nonproliferation agreements.

¹³See Agreement Between the Government of India and the Government of Canada in Collaboration in the Development of Heavy Water Power Reactor Systems, New Delhi, 16 December 1963, <http://meaindia.nic.in/treatiesagreement/1963/chap290.htm> (accessed October 22, 2005), amended December 16, 1966.

IAEA monitoring. There is a distinct possibility that plutonium produced in these facilities (which are well suited for producing especially high-quality plutonium) has been incorporated into Indian nuclear weapons.

Presumably, these facilities will now be declared civilian and placed under IAEA monitoring, but the issue Congress must focus on is whether any separated plutonium and plutonium-bearing spent fuel the reactors have produced over the years will also be placed under IAEA safeguards. If not, depending on the terms governing replication of technology from the Rajasthan reactors, we could confront a similar question to that posed by CIRUS, where India has improperly appropriated nuclear technology originally supplied under non-explosive use pledges and holds open the option of using the reactors' past output for nuclear arms.¹⁴

VI.

How should the Congress respond to the points I have raised?

The single most important step that the Congress can take is to *exercise its authority under the Atomic Energy Act to review and vote upon new agreements for cooperation*. I would hope that the House of Representatives, in particular, would be attentive to this authority, since the Atomic Energy Act provides one of the few opportunities for the House to rule upon international agreements, a prerogative normally reserved to the Senate. I would therefore urge *this Committee to forcefully oppose any effort by the Administration to bypass the normal process for considering such agreements*, for example, by appending special legislation authorizing nuclear sales to India to an omnibus appropriations bill or other such "unopposable" legislation.

Second, I would urge the Committee to *demand that India's past violations of international nuclear transfer agreements be rectified* before the United States will consider renewed nuclear trade, by requiring that India declare CIRUS to be a civilian facility and place that reactor, *and the plutonium it has produced*, under IAEA safeguards so as to preclude their use for nuclear weapons. Locking down the past and future plutonium production potential of India's Canadian-style nuclear power reactors is also critical in this regard.¹⁵

Third, if these conditions are met and:

- if the Congress determines after examining the classified record, that India is, indeed, not engaged in activities that promote proliferation elsewhere; and
- if India continues to demonstrate its commitment other international non-proliferation norms by adopting internationally accepted export control standards and supporting key U.S. nonproliferation initiatives (including those regarding Iran at the IAEA),

then opening the door to renewed civil nuclear cooperation with India under strict controls might be justified.¹⁶

¹⁴I have heard, although I have not been able to confirm, that the Rajasthan reactors were provided by Canada under "replication" restraints, such that all of the assurances concerning the use of the Rajasthan units were to carry over to any additional reactors based on their technology. If so, the case that India should place all plutonium produced through the use of the replicated Canadian-style reactors under IAEA safeguards would be still stronger.

¹⁵Variations on these principles could also be effective, for example, if India, without admitting any past wrong-doing, shut down CIRUS on the grounds of obsolescence and declared a portion of the country's high-quality plutonium to be "excess to its defense needs" and placed it under IAEA inspection. The United States and Russia have made similar declarations of excess fissile material, and this has been or will be placed under IAEA monitoring.

¹⁶A number of my colleagues have stressed the importance of capping India's nuclear potential by requiring India to accept a freeze on the future production of plutonium and highly enriched uranium for nuclear weapons (that is, production of these materials outside of IAEA safeguards), by means of a "fissile material cut-off" agreement leading to an international Fissile Material Cut-Off Treaty. I believe the Administration is also actively pursuing this goal. I agree that this is a most important objective, but the approach that I have suggested accomplishes the goal of limiting Indian fissile material stocks more effectively.

First, it immediately eliminates production of plutonium by one of India's two plutonium production reactors and does so verifiably, since IAEA safeguards would apply; the "Fissile Material Cut-Off Treaty" espoused by the Administration would not be verifiable. Second, the approach I have outlined eliminates the possibility that newly produced plutonium from India's large-scale Canadian-style nuclear power plants might be used to contribute to the Indian nuclear arsenal. Third, and most important, the approach I have suggested would capture and place under IAEA inspection past production of plutonium by India that is based on the use of the CIRUS reactor and the Canadian-style power reactors, thus immediately *reducing* the amount of Indian fissile material available for weapons, a nonproliferation outcome superior to a mere freeze on new production. It would be many years before India would be able to rebuild its fissile material

In these circumstances, the United States would not only have promoted closer ties with a natural ally, but it would have genuinely advanced crucial nonproliferation goals and established important boundaries that do not now exist on India's nuclear weapons potential, while also respecting its status as a nuclear weapon power.

VII.

Earlier in my remarks, I stated that to amend U.S. nuclear cooperation policy, there must both be a worthy partner and compelling reasons to make the change. The Administration considers its nuclear concessions to be part of a larger set of initiatives aimed at building a "strategic partnership" with India. The unstated goal of this strategic partnership is to build India into a political and military counterweight to China.¹⁷

I strongly support closer ties with India and agree with the premise that our two countries' commitments to pluralistic democracy create the basis for strong political bonds. But I find it most difficult to imagine that we will transform India into a de facto military ally, one that might support us, for example, by placing its forces on alert, during a U.S.-China crisis over Taiwan. Sacrificing an important nonproliferation standard in pursuit of such a will-o-the-wisp alliance hardly seems defensible. Moreover, even if a military alliance were practicable, when one examines our relations with two other non-NPT states, it is clear that we have successfully built such alliances with Israel and, as part of the Global War on Terrorism, with Pakistan, without the need to bend our nuclear transfer rules.

In addition, of course, India in its own self-interest has already established what it considers to be a sufficient countervailing military and political presence vis-a-vis China, without the need for external alliances.¹⁸ Nor is it necessary for the United States to incentivize India to oppose radical Islam. India is already committed to this path for reasons we all know, and hardly needs the reward of U.S. nuclear trade to continue this policy.

In sum, geo-politics and grand strategy do not appear to provide compelling reasons for changing our nonproliferation rules.

Finally, as I have mentioned, it is possible that more specific nonproliferation undertakings by India could offer a justification for such changes, but it is very premature to make such a judgment. Many of the undertakings India presented in the understanding of July 18 are, as I mentioned, already required under international law, while others—such as the pledge to continue its unilateral moratorium on nuclear testing—are little more than a restatement of current Indian policy.

There is much work to be done to better understand what India is preparing to offer as part of the bargain over renewed U.S. nuclear cooperation. In this setting, I urge the Congress to proceed cautiously and avoid taking major decisions before all of the pending issues are satisfactorily clarified.

Chairman HYDE. Thank you, Mr. Specter. Mr. Rohrabacher of California?

Mr. ROHRABACHER. Thank you very much, Mr. Chairman, and again, I would like to thank Chairman Hyde for his leadership on this issue. We are trying to fine tune a grand strategy, that is what it sounds like to me. Because I was very gratified by the Administration's India offensive, if you would, as part of a grand strategy for a better world. And if we are going to have a better world, we have to have a good relationship with India and a positive relationship. But, you know, great strategies can be brought down by small details, what seem small details, maybe a small part of the agreement will undermine everything else, and that is what we are talking about here today.

stocks to current levels, by which time a global Fissile Material Cut-Off Treaty will likely be in place.

¹⁷ See e.g., "US wants to help India be a superpower." Agence France Presse, March 26, 2005, <http://sify.com/news/othernews/fullstory.php?id=13702274> (accessed October 22, 2005).

¹⁸ I would also point out that it is most difficult to predict China's future orientation—whether it will emerge as a peaceful, status quo power focused on its own economic development and political evolution, or as an assertive, ambitious player on the international stage, with expansionist goals. Obviously it is in the U.S. interest to promote the former outcome, but an explicit policy of developing a counter-China military alliance with India could be perceived in Beijing as a hostile initiative that could drive China in the opposite direction.

Let me just note that the current Pakistani Prime Minister, at one point when he was asked why Pakistan must develop its own nuclear weapons, talked about how important it was for Pakistan to have the weapons. And I remember he said if it means that our people have to eat grass, we need to have this capability.

I would hope that the Indian Government is listening to what is happening here today and take very seriously this issue so that the objections that we are looking at can be dealt with, rather than thinking that their people will eat grass like the Pakistanis in order to achieve certain capabilities.

This is for the whole panel. First of all, let me ask this. Is this about two things, the production of electricity for India so they will have the energy to produce the electricity without having a byproduct of this capability, something that will help them produce nuclear weapons? And, number two, about the technology needed to make sure that we are working with them on their space program? Is that what this is really all about, those two issues? Please, yes, sir?

Mr. SOKOLSKI. No, I do not think it is.

Mr. ROHRABACHER. Move forward, then, tell me what it is.

Mr. SOKOLSKI. In the briefing materials that go with this testimony, there are charts that show what the energy needs of India are for the next 10 years. You can say eventually we are going to all need fusion and hydrogen, but for the next decade, nuclear is a bad investment for a lot of structural, technical and financial reasons. But it is a very emotional issue in India. We should not, though, let emotions get in the way of strategy.

Mr. ROHRABACHER. Do they think that the nuclear energy issue is their electricity?

Mr. SOKOLSKI. The people we are negotiating with run their atomic energy program. You will be stunned to hear that they think that. But we do not negotiate with a lot of other people who do not get any electricity, because the grid does not go where it needs to go. I think if you are worried about a long term relationship with the people of India, you are going to have to think a little bit bigger than the few people we are negotiating with.

Mr. ROHRABACHER. So what we need to do, in your estimation, is to basically break that mindset that India needs the nuclear energy plants in order to produce electricity when, in fact, they need other sources of electricity?

Mr. SOKOLSKI. It is on the list, but as the Department of Energy laid out in its own dialogue agenda, it is the last item on a long list and it is not urgent. That is the reason you have time to get this right. They are not running out of electricity because they do not have nuclear power plants, that is for sure.

Regarding the space launch—

Mr. ROHRABACHER. Excuse me, before you go onto that second issue, so you would suggest that we would talk to India about alternative sources of energy rather than—

Mr. SOKOLSKI. One of the good things about the cooperation on energy is all of the non-nuclear things that are on that list. And those things are cost effective, they are efficient, they are timely and they should be acted on first.

Mr. ROHRABACHER. Okay and we should be pushing them in that direction?

Mr. SOKOLSKI. Well, you know, if we do not want to be subsidizing and guaranteeing our own exploits and having the Indian Government continuing to have monopoly power over the nuclear sector, which is how they run it. Every other part of the energy sector is being opened up to the free market. The nuclear sector is closed and run by state monopoly.

If we want to get them off of that, I think we had better start helping India where they do have more free market mechanisms and that is everywhere else.

Mr. ROHRABACHER. We have to convince them of that?

Mr. SOKOLSKI. No, no, they have already convinced themselves that the free market can operate everywhere else but in nuclear. So we have a simple rule. We invest where we can, not where we have to guarantee all the loans.

Mr. ROHRABACHER. This makes it much more complicated. Thank you very much, Mr. Chairman.

Chairman HYDE. Thank you. Mr. Lantos?

Mr. LANTOS. Thank you very much, Mr. Chairman. Let me first commend all five of our witnesses for singularly valuable and thoughtful testimony. I have learned a great deal and I am sure my colleagues have, as well.

Mr. Chairman, the issues that we raise are very complex and we have five brilliant people in front of us. I would nevertheless hope that you could basically say yes or no to these questions, because finally we will have to vote yes or no and all of the footnotes become irrelevant.

As I listened to you and as I read your testimony, all of you are saying that with improvements you are prepared to support the agreement reached between the American Administration and the Indian Government, which leads me to the magical question, are any of the improvements that you are recommending in your best judgment deal breakers? Are they non-stoppers? Dr. Joeck?

Mr. JOECK. Thank you. I believe a number of them are deal breakers. This has been a complicated relationship running back a number of years and it is not just on nuclear issues as we all know. I believe there will be another hearing to discuss the breadth of the agreement. But there are other elements to be considered.

Mr. LANTOS. Dr. Einhorn?

Mr. EINHORN. I do not know if it is a deal breaker. The hardest one for India would be to stop producing fissile material for nuclear weapons. But I should remind the Committee, India in principle supports a fissile material cut off. It says that it does not have a strategic requirement for parity with China or with anybody else. All it wants to do is to insure that its credible minimum deterrent needs are met.

Now India has produced a lot of plutonium and I was involved in negotiations with them in the late 90s in which they said we are not prepared to stop production now. We need more plutonium for our credible minimum deterrent.

Mr. LANTOS. In your view, are your criteria deal breakers?

Mr. EINHORN. The Indians may be reluctant to stop production now, but if not now, within a half year or a few years, I think it

should be possible for them to meet their minimum deterrent requirements.

Mr. LANTOS. Dr. Albright?

Mr. ALBRIGHT. I do not think any of the conditions I put forth are deal breakers, but they will slow down the deal. Can I add one thing to your first question? I would say, no. I think that these conditions may not be enough, yet what we need to keep in mind, again, obviously, to go slow, is what damage has already been caused? What are China and Russia going to do? Are they going to look for exemptions to nonproliferation rules?

Mr. LANTOS. Mr. Sokolski?

Mr. SOKOLSKI. They will be a deal breaker for a bad deal, but they are essential for a good one and you can get it and you should take your time to get it. We did it with China, you can do it with India.

Mr. LANTOS. Mr. Spector?

Mr. SPECTOR. Well, I guess one question is whether the nuclear dimension is a deal breaker in itself or could it be foregone? We have excellent relations with another state that is in the same category as India and with whom we have no nuclear relations. We have a basic alliance with this country. So I think the error here is to make this aspect, the nuclear dimension, so large in this relationship. I mean, we all know the relationship is vast and that this is actually a speck that happens to be politically important to the Indians and to us, as well. But in reality, the relationship is there and that is not going to be broken if the nuclear matter gets dragged out, if we have further debates and the rest. So I think we need to put it in context.

Mr. LANTOS. May I just follow up with a second general question? A number of you have made references to equal treatment of all countries. There is growing reluctance in the Congress and in the country to buy that as a principle, not vis-a-vis this issue, but vis-a-vis all issues. Equal treatment of all countries led us to having the Sudans of this world chair the United Nations Human Rights Commission. So if you expect us, gentlemen, to be politically valued blind in dealing with India, we will not meet your expectations.

One of you referred to our North Korea review; this is how North Korea will view this. Well, we do not view North Korea as equivalent to India. India is a democracy, an open country with around the world reasonably good human rights record. So we will not be blinded by an automatic mechanistic, robotic view of what we have to do in the field of international relations.

We, in fact, will take into account our view of India as an entity, as a democratic, friendly, human rights respecting, law abiding country. And we will not meet your criteria if your criteria includes a mechanistic, universal approach to all countries. The fact that we do not view Iran's right as identical to India's right in our judgment is well founded. Iran is a supporter of terrorism, it is running a dictatorial police state internally, it hates our values and we will have a different policy vis a vis Iran than we will vis a vis India. If any of you would care to comment?

Mr. JOECK. I would like to second that. I think that is exactly right with respect to India and is one of the reasons why we should

look carefully at why an exception should be made for India with respect to the proliferation elements of the agreement.

Mr. LANTOS. Dr. Einhorn?

Mr. EINHORN. Sure, we treat different countries differently depending on their behavior. But we should look at India's own standard, its own statement. It says at the most senior levels, it is prepared to assume the same responsibilities, to adopt the same policies and practices, as the other nuclear weapons states. It is their own position. We should hold them to that.

We should also adopt country neutral criteria, the same criteria applied across the board. Now differing countries will fulfill those criteria to different degrees and that is where the differences come in.

Mr. LANTOS. Dr. Albright? Mr. Sokolski?

Mr. SOKOLSKI. I think Bob has got it exactly right. We are selling this, they are buying this, because they are going to be treated as an advanced, responsible, nuclear state. Now that is not everybody and that is not mechanistic, but you better make darn sure that you get those criteria to match up to those words. And they are not there yet, you are not there yet.

Mr. LANTOS. Mr. Spector?

Mr. SPECTOR. I think you do have to make distinctions, but I also believe that you must have certain universal principles that you can work from and draw the international community behind you in the appropriate case. A country that—and now I am thinking of Iran—a country that grossly cheats on international IAEA inspections all those years, you do not want to have to take them on alone. You want every other country to say this was wrong and that is what we are getting.

So I do not think you want to forsake multilateral treaties and other mechanisms of this kind, even as you want to attempt to give preferences and penalties to particular countries. So I think there is a balance to be struck. You do not want to go to one extreme or the other.

Mr. LANTOS. Thank you very much. Thank you, Mr. Chairman.

Chairman HYDE. Mr. Boozman? Mr. Royce?

Mr. ROYCE. Thank you, Mr. Chairman. Mr. Albright, in your statement, you said you were skeptical about safeguards. I think your word were, even in the best of circumstances, the barrier between a military and civilian program can be porous. I wanted to see if the other panelists agreed with that, and if so, what are the implications for any agreement like this and is there language, and maybe Dr. Sokolski could start on this one, is there language that could cinch this up? You know, how do we make the criteria match the words. How do we help develop it?

Second and my last question to the panelists, does this proposed agreement affect the Administration's ability to affect the specific case that President Bush made back in 2004 that the NPT loophole needs to be closed? And by loophole, that is the interpretation that countries have the right to highly enriched uranium and processed plutonium and then just let them be a step away from possessing nuclear weapons? Do you see any implications on that?

Mr. SOKOLSKI. First for the record, I am not a doctor. I once got in trouble, somebody thought I was. I am an ABD, all but dissertation, higher degree.

Mr. ROYCE. I stand corrected. You certainly professorial.

Mr. SOKOLSKI. Thank you. You can call me Henry.

Mr. ROYCE. Thank you, Henry.

Mr. SOKOLSKI. Okay. You had three questions. First, ultimately the only way you can absolutely be certain about anything is to have people everywhere and treaties that are legally binding, and all sorts of goodwill. You are not going to probably have all that, even in the case of India, but I think it is a friendly country. On this, I think Mr. Lantos is making sound enough points. It is not North Korea.

However, I do think legally Congress should insist that India go on the record that it will meet these minimum criteria that I laid out in my testimony and some of the other ideas that were presented can be entertained, as well.

As for the loophole, if you read the President's speech carefully, he actually says two things. First he says that that there is a loophole, then he says it is being cynically manipulated, which suggests it is not a loophole, that it is the way in which the treaty is interpreted. As I have testified before here, I think the treaty actually does not have explicitly that loophole, but we have lazily interpreted the treaty as if it actually says those words, that enrichment and reprocessing and nuclear fuel making is a right. It does not say that. It says that you have the rights to the benefits of peaceful nuclear energy. And that has some criteria that we should be much more explicit about.

Chairman HYDE. We have—

Mr. EINHORN. Can I just address the question, does it make it harder? Mr. Royce asked this question, does it make it harder for the Administration to achieve the objective of discouraging additional countries from acquiring enrichment and reprocessing capabilities? I think it makes it much harder. We are asking NPT parties not just to give up nuclear weapons, but also enrichment and reprocessing capabilities. It goes, you know, considerably beyond what they thought their obligation was.

In other words, we are trying to raise the bar for NPT parties when we are lowering the bar for countries that have not even joined the NPT. So I think it puts an additional burden on that initiative.

Mr. ROYCE. Thank you, Mr. Chairman.

Chairman HYDE. We have two votes on the Floor now. I think I will ask the panel if they will accept questions in writing that are not asked, if we adjourn? But rather than have you hang around indefinitely, we will adjourn the meeting with deep thanks for very instructive testimony. Very helpful, thank you. Committee stands adjourned.

[Whereupon, at 12:10 p.m., the Committee was adjourned.]

