

**U.S.-INDIAN NUCLEAR ENERGY COOPERATION:  
SECURITY AND NONPROLIFERATION IMPLICA-  
TIONS**

---

---

**HEARING**

BEFORE THE

**COMMITTEE ON FOREIGN RELATIONS  
UNITED STATES SENATE**

ONE HUNDRED NINTH CONGRESS

FIRST SESSION

NOVEMBER 2, 2005

Printed for the use of the Committee on Foreign Relations



Available via the World Wide Web: <http://www.gpoaccess.gov/congress/index.html>

U.S. GOVERNMENT PRINTING OFFICE

27-404 PDF

WASHINGTON : 2006

---

For sale by the Superintendent of Documents, U.S. Government Printing Office  
Internet: [bookstore.gpo.gov](http://bookstore.gpo.gov) Phone: toll free (866) 512-1800; DC area (202) 512-1800  
Fax: (202) 512-2250 Mail: Stop SSOP, Washington, DC 20402-0001

COMMITTEE ON FOREIGN RELATIONS

RICHARD G. LUGAR, Indiana, *Chairman*

CHUCK HAGEL, Nebraska	JOSEPH R. BIDEN, JR., Delaware
LINCOLN CHAFEE, Rhode Island	PAUL S. SARBANES, Maryland
GEORGE ALLEN, Virginia	CHRISTOPHER J. DODD, Connecticut
NORM COLEMAN, Minnesota	JOHN F. KERRY, Massachusetts
GEORGE V. VOINOVICH, Ohio	RUSSELL D. FEINGOLD, Wisconsin
LAMAR ALEXANDER, Tennessee	BARBARA BOXER, California
JOHN E. SUNUNU, New Hampshire	BILL NELSON, Florida
LISA MURKOWSKI, Alaska	BARACK OBAMA, Illinois
MEL MARTINEZ, Florida	

KENNETH A. MYERS, Jr., *Staff Director*  
ANTONY J. BLINKEN, *Democratic Staff Director*

## CONTENTS

---

	Page
Biden, Hon. Joseph R. Biden, Jr., U.S. Senator from Delaware .....	3
Prepared statement .....	5
Burns, Hon. R. Nicholas, Under Secretary for Political Affairs, Department of State, Washington, DC .....	6
Prepared statement .....	11
Carter, Hon. Ashton B., codirector, Preventive Defense Project, Belfer Center for Science and International Affairs, Harvard University, Cambridge, MA .	43
Prepared statement .....	47
Joseph, Hon. Robert G., Under Secretary for Arms Control and International Security, Department of State, Washington, DC .....	17
Prepared statement .....	19
Krepon, Michael, cofounder and president emeritus, Henry L. Stimson Center, Washington, DC .....	65
Prepared statement .....	66
Lehman, Hon. Ronald F., II, director, Center for Global Security Research, Lawrence Livermore National Laboratory, Livermore, CA .....	36
Prepared statement .....	38
Lugar, Hon. Richard G., U.S. Senator from Indiana .....	1
Sokolski, Henry D., executive director, Nonproliferation Policy Education Cen- ter, Washington, DC .....	51
Prepared statement .....	54
Viewgraphs .....	58
India's ICBM—On a “Glide Path” to Trouble .....	85
Feeding the Nuclear Fire .....	93
ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD	
Einhorn, Hon. Robert J., senior adviser, International Security Program, Cen- ter for Strategic and International Studies, Washington, DC:	
Letter to Senator Lugar .....	79
Recommended Modifications of U.S. Law and NSG Guidelines .....	80
Prepared statement .....	81
Feingold, Hon. Russell D., U.S. Senator from Wisconsin, prepared statement ..	77
Rademaker, Stephen G., Acting Assistant Secretary of State for International Security and Nonproliferation, State Department, Washington, DC, state- ment before the NSG Consultative Group, October 18–19, 2005 .....	77
Responses to questions submitted by Senator Lugar:	
Responses of Under Secretaries Burns and Joseph .....	97
Responses of Under Secretary Burns .....	103
Responses of Secretary Joseph .....	104



# **U.S.-INDIAN NUCLEAR ENERGY COOPERATION: SECURITY AND NONPROLIFERATION IMPLICATIONS**

WEDNESDAY, NOVEMBER 2, 2005

U.S. SENATE,  
COMMITTEE ON FOREIGN RELATIONS,  
*Washington, DC.*

The committee met, pursuant to notice, at 3 p.m., in room SD-419, Dirksen Senate Office Building, Hon. Richard G. Lugar (chairman of the committee) presiding.

Present: Senators Lugar, Hagel, Chafee, and Biden.

## **OPENING STATEMENT OF HON. RICHARD G. LUGAR, U.S. SENATOR FROM INDIANA**

The CHAIRMAN. The Senate Foreign Relations Committee is called to order.

The Foreign Relations Committee meets today to consider the Joint Statement issued by President Bush and Prime Minister of India on July 18, 2005. This document stands as a milestone in the United States-Indian relationship. It covers the full range of economic, political, and security issues, as well as matters related to nuclear energy cooperation, and has the potential to bring our two countries closer together than ever before.

India is a very important emerging power on the world stage. It enjoys a vibrant democracy, a rapidly growing economy, and increasing influence in world affairs. Indians have come to the United States to study in our universities, to work in our industries, and to live here as citizens. It is clearly in the interest of the United States to develop a strong strategic relationship with India.

At this point, let me pause for a moment to express the committee's condolences and our sympathy for the people of India, who suffered a terrible terrorist attack over the weekend in New Delhi. We fully support India in its battle against terrorism.

Although the Joint Statement covers many areas of policy, commentary has focused narrowly on the nuclear energy section, which states that India will be treated as, "a responsible state with advanced nuclear technology." Critics and advocates acknowledge that this represents a departure from previous U.S. policies and international practices. India has never signed the Nuclear Non-Proliferation Treaty, the foundation of international efforts to stop the spread of nuclear weapons. India has developed a nuclear weapons arsenal, in conflict with the goals of the treaty. New Delhi, in 1974, violated bilateral pledges it made to Washington

not to use U.S.-supplied nuclear materials for weapons purposes. And, more recently, Indian scientists have faced United States sanctions for providing nuclear information to Iran.

India's nuclear record with the international community also has been unsatisfying. It has not acknowledged, or placed under effective international safeguards, all of its facilities involved in nuclear work. Its nuclear tests in 1998 triggered widespread condemnation and international sanctions.

Prior to the July 18 Joint Statement, India had repeatedly sought, unsuccessfully, to be recognized as an official nuclear weapons state, a status the NPT reserves only for the United States, China, France, Russia, and the United Kingdom. Opponents argue that granting India such status will undermine the essential bargain that is at the core of the NPT; namely, that only by foregoing nuclear weapons can a country gain civilian nuclear assistance. They observe that permitting India to retain nuclear weapons while it receives the same civilian nuclear benefits as nations that have foresworn weapons programs would set a harmful precedent that would encourage other nations to take India's path. New Delhi has long claimed that the NPT is discriminatory, and that the international community has instituted what it calls a, "nuclear apartheid" against it.

Implementation of the July 18 Joint Statement requires congressional consent, as well as modifications to nonproliferation laws and an American commitment to work with allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India. This committee, and ultimately the entire Congress, must determine what effect the Joint Statement will have on United States efforts to halt the proliferation of weapons of mass destruction. To date, no associated legislative proposals have been offered by the administration. Likewise, there does not appear to be a specific Indian timetable to fulfill its obligations under the Joint Statement.

India has agreed, according to the statement, to, "assume the same responsibilities and practices, and acquire the same benefits and advantages, as other leading countries with advanced nuclear technology."

These responsibilities include seven specific action steps:

One, identifying and separating civilian and military nuclear facilities and programs in a phased manner, and declaring them to the IAEA;

Two, voluntarily placing the civilian nuclear facilities under IAEA safeguards;

Three, signing, and adhering to, an Additional Protocol;

Four, continuing India's unilateral moratorium on nuclear testing;

Fifth, working with the United States to conclude a multilateral Fissile Material Cutoff Treaty;

Sixth, refraining from the transfer of enrichment and reprocessing technologies to states that do not have them, and supporting international efforts to limit their spread; and, finally,

Seven, complying with the Missile Technology Control Regime, the MTCR, and Nuclear Suppliers Group, NSG, guidelines.

There are four key questions that today's hearing seeks to answer.

The first question is, How does civil nuclear cooperation strengthen the United States-Indian strategic relationship? And why is it so important?

Second, How does the Joint Statement address United States concerns about India's nuclear programs and policies?

Third, What effects will the Joint Statement have on other proliferation challenges, such as Iran and North Korea and the export policies of Russia and China?

And, fourth, What impact will the Joint Statement have on the efficacy and future of the NPT and the international nonproliferation regime?

Today's hearing will consist of two panels. On the first panel, Under Secretary of State for Political Affairs, Nicholas Burns, and Under Secretary of State for Arms Control and International Security, Robert Joseph, will lay out the administration's case for the July Joint Statement. They are both good friends of our committee, and I want to express my personal appreciation for their efforts to meet with Senators on this and other important issues.

On the second panel, we will hear from several outside experts. Ronald Lehman, former director of the U.S. Arms Control and Disarmament Agency, and currently director of the Center for Global Security Research at Livermore National Laboratory; and Ashton Carter, codirector of the Preventive Defense Project will present their views to the committee. Dr. Lehman and Dr. Carter are co-chairmen of the Non-Proliferation Policy Advisory Group, an informal panel of experts that I have convened to examine nonproliferation issues. They are joined by Mr. Henry Sokolski, executive director of the Nonproliferation Policy Education Center, and Mr. Michael Krepon, cofounder and president emeritus of the Henry L. Stimson Center.

We deeply appreciate the appearance of all of our witnesses, and we look forward to their testimony.

I would say at the outset, gentlemen, that each of your full statements will be made a part of our record. As you are asked to proceed, please summarize or give as much as you wish. We want to hear from you. These are very serious issues.

I now want to recognize the distinguished ranking member of our committee, Senator Biden.

**STATEMENT OF HON. JOSEPH R. BIDEN, JR., U.S. SENATOR  
FROM DELAWARE**

Senator BIDEN. Mr. Chairman, thank you for holding this hearing and for assembling such a distinguished and deep panel here. And I mean that sincerely.

And, as we say in this business, Mr. Chairman, I'd like to associate myself with your remarks, and, as a consequence, eliminate the first half of what I was going to say, because it's repetitious, and ask that my entire statement be placed in the record—

The CHAIRMAN. It will be placed in the record in the full.

Senator BIDEN [continuing]. So that I can just speak to the second half of what I was going to say.

As our colleagues in the administration know, this is not a “slam dunk” here. There are a lot of questions. I had lunch today, as you and Mr. Hyde did last week, I believe, with the Secretary of State and some of her personnel, and this was a topic of some discussion. And my House colleague, Congressman Lantos, was pointing out what difficulty this may face in the House.

Obviously, it’s in our interest to have very close relationships with India. At least, I believe that. I think we all do. And as we understand it, India, in return for the proposed opening of nuclear commerce, would separate civil nuclear facilities from its military ones, put its civil facilities under IAEA safeguards, and sign and implement an Additional Protocol with IAEA, and it would work with the United States on, as was mentioned, a multilateral Fissile Material Cutoff Treaty, continue its moratorium on nuclear testing, and improve its export control regime, all of which are very much in our mutual interest.

As I said, I strongly support close relations with India. India is not only the world’s most populous democracy, it’s also a major power in the region and a longstanding contributor to world progress in technology, philosophy, and the arts. India and the United States are, in my view, natural partners, but, at the same time, both countries have to ensure that close relations don’t lead to further nuclear proliferation. If this nuclear deal, in fact, does have, as critics say, the effect of significantly undermining non-proliferation, even by accident, the cost to the world, in an increased risk of nuclear war or terrorism, would be a terrible legacy to leave.

And I wonder how good the July 18 deal really is. Critics have charged that India’s promises are quite unclear regarding separation of civil from military facilities, and that it contains nothing new on testing, on the Fissile Material Cutoff Treaty, or on export controls.

So, it seems to me, as you gentlemen know, it’s up to the administration to demonstrate that, in dealing with the dilemma of countries that have not signed the NPT, it will strengthen nonproliferation rather than turning its back on over 50 years of U.S. policy.

The July 18 Joint Statement raises several questions, some of which have been raised by my colleague, that I hope the witnesses are ready to address today. Let me summarize a few of them.

First, Will this open the door to nuclear cooperation with Pakistan, even if that is not our intent?

Second, What implications would an Indian exemption have for potential nuclear weapons states that have abided by the bargain implicit in the NPT? What concerns did other countries raise at the recent Nuclear Suppliers Group meeting in this regard?

Third, Will an Indian exception decrease our ability to forge a common front against the nuclear ambitions of Iran and North Korea, or is it totally unrelated?

Could Russia use the Indian precedent to justify technology transfers to Tehran? Could China use it to justify sales to Iran, or even to North Korea?

Will India allow significant international safeguards on its civilian nuclear entities?

Will it open as many facilities as possible to international safeguards, as the United States does? Or will it take Russia or China as its model?

Will it agree to permanent safeguards on civil nuclear facilities that it declares?

And how confident are we that India shares our nonproliferation concerns? Why were two of its senior scientists sanctioned by the United States, just months ago?

How binding are the commitments that each side has made in the July 18 statement? If India were to conduct a nuclear test or did not put many facilities under safeguards, or if the United States Congress or the NSG were to attach conditions to the India exception, would the other country be released from its promises?

How can we assure that what we do regarding India will further nonproliferation? Is there a useful way to address the broader dilemma of nonsigners of NPT, rather than just India?

And, last, how can we assure that what we do to preserve nonproliferation equities will not undermine the important United States-Indian relationship that we all want to improve?

These are very tough questions. I don't have the answers to all of them. But that is in the nature of a serious hearing. So, I look forward to hearing from our witnesses—all of them, but beginning with the administration.

I thank you, Mr. Chairman. And I thank the Secretaries for being here.

[The prepared statement of Senator Biden follows:]

PREPARED STATEMENT OF HON. JOSEPH R. BIDEN, JR., U.S. SENATOR FROM DELAWARE

Mr. Chairman, as you and I both know, there may be no more urgent issue for our country than nuclear nonproliferation. Today's hearing addresses some of the most difficult aspects of this issue, and I am grateful to you for assembling such excellent witnesses to help us.

I hope that this is only the first of several hearings on nuclear trade between the United States and India. The matter is complex and Congress will be asked to legislate on it, so we need careful consultation with the executive branch. And I am sure you agree that any needed legislation on this matter should go through the Foreign Relations Committee.

The Nuclear Non-Proliferation Treaty includes this basic bargain: Countries that renounce nuclear weapons gain the right to civil nuclear cooperation with the world's nuclear powers. The NPT and this bargain at its core have deterred many countries from pursuing nuclear weapons.

Several countries did not sign the NPT—including India and Pakistan, which openly tested nuclear weapons, and Israel, which is presumed to have them.

Past practice has been to ignore or reject the status of new entrants to the nuclear "club," and to forswear nuclear commerce with them. This has not stopped those countries from developing nuclear weapons, but it may have slowed or limited their progress.

We are left with the problem of how to assure that these countries do not become proliferators themselves or lead other countries to develop nuclear weapons, as well as the concern that a forthright nonproliferation policy might sour our relations with important and otherwise friendly countries.

President Bush and Indian Prime Minister Singh propose to change the rules for India. The United States would seek changes in U.S. law and in NSG Guidelines to permit "full civil nuclear energy cooperation and trade with India."

India, in return, would separate its civil nuclear facilities from its military ones, put its civil facilities under IAEA safeguards, and sign and implement an Additional Protocol with the IAEA. It would work with the United States on a multilateral Fissile Material Cut-Off Treaty, continue its moratorium on nuclear testing, and improve its export control regime.

I strongly support closer relations between the United States and India. India is not only the world's most populous democracy, but also a major power in the region and a long-standing contributor to world progress in technology, philosophy and the arts. India and the United States are natural partners.

At the same time, both countries must ensure that closer relations do not lead to further nuclear proliferation. If we were to undermine nuclear nonproliferation, even by accident, the cost to the world—in an increased risk of nuclear war or terrorism—would be a terrible legacy to leave.

And I wonder how good the July 18 deal really is. Critics have charged that India's promises are unclear (regarding separation of civil from military facilities) or nothing new (on testing, a Fissile Material Cut-Off Treaty, and export controls).

So, it is up to the administration to demonstrate that in dealing with the dilemma of countries that have not signed the NPT, it will strengthen nonproliferation, rather than turning its back on over 50 years of U.S. policy. The July 18 Joint Statement raises several questions that I hope our witnesses will address today, among them:

(1) Will this open the door to nuclear cooperation with Pakistan, even if that is not our intent?

(2) What implications would an India exemption have for potential nuclear weapon states that have abided by the bargain implicit in NPT? What concerns did other countries raise at the recent Nuclear Suppliers Group meeting?

(3) Will an "India exemption" decrease our ability to forge a common front against the nuclear ambitions of Iran and North Korea? Could Russia use the India precedent to justify technology transfers to Tehran? Could China use it to justify sales to Tehran or even Pyongyang?

(4) Will India allow significant international safeguards on its civilian nuclear entities? Will it open as many facilities as possible to international safeguards, as the United States does, or will it take Russia or China as its model? Will it agree to permanent safeguards on the civil nuclear facilities it declares?

(5) How confident are we that India shares our nonproliferation concerns? Why were two of its senior scientists sanctioned a few months ago?

(6) How binding are the commitments that each side made in the July 18 Joint Statement? If India were to conduct a nuclear test or did not put many facilities under safeguards, or if the U.S. Congress or the NSG were to attach conditions to their "India exemptions," would the other country be released from its promises?

(7) How can we assure that what we do regarding India will further nonproliferation? Is there a useful way to address the broader dilemma of non-signers of the NPT, rather than just India? And,

(8) How can we assure that what we do to preserve nonproliferation equities will not undermine the important U.S.-India relationship that we all want to improve?

These are tough questions, but that is in the nature of serious hearings. I look forward to the testimony of our witnesses.

The CHAIRMAN. Thank you, Senator Biden.

Senator Hagel, do you have an opening comment?

Senator HAGEL. No; thanks.

The CHAIRMAN. Very well.

We'll proceed to our witnesses. And I'll ask you to testify in this order: First of all, Secretary Burns, and then Secretary Joseph.

Secretary Burns, we are delighted that you're here, and would you please proceed?

**STATEMENT OF HON. R. NICHOLAS BURNS, UNDER SECRETARY FOR POLITICAL AFFAIRS, DEPARTMENT OF STATE, WASHINGTON, DC**

Mr. BURNS. Mr. Chairman, thank you very much. Senator Biden, Senator Hagel, thank you for the invitation, to Bob Joseph and myself, to be with you.

We have testimony we've submitted for the record. We will—I will not read my testimony to you. But I would like to address two questions, and I think that, in doing so, perhaps we can begin to

answer some of the questions that you and Senator Biden have put on the table for us.

The first is to describe to you the nature and the schedule of our negotiations with the Indians that do continue toward the fulfillment of this civil nuclear energy agreement and to talk about, obviously, the role of Congress and the need for Congress to be fully briefed and to take a final decision on this issue.

The second would be to provide a little bit of rationale for why we undertook this deal, and also to discuss the strategic benefits of the fuller relationship that we have foreseen.

So, I'll proceed on that basis.

President Bush said, a couple of months ago, that this century will see democratic India's arrival as a force in the world. And he believes—Secretary Rice believes—that it is in our national interest to develop a strong and forward-looking strategic engagement with India as the global system shifts inevitably eastward toward Asia. And we know that many in Congress embrace that view. You've both said this in your opening statements. And we believe the time is right to seek such a relationship with India.

During the cold war, India was the ultimate nonaligned country; we were the ultimate aligned country. And the cold war is now long past. So, it's our view that it's time to build this relationship. And that was the intent that the President had when he met with Prime Minister Singh here in Washington on July 18.

We look at India as a rising strategic power. Within the first quarter of this century, it is likely to be included among the world's five largest economies. It will soon be the most populous nation in the world. It has a demographic distribution that bequeaths it a very large and youthful and skilled workforce. Its military forces are increasingly training with ours, working with ours. They are large, they are capable, they're sophisticated, and they also are under civilian control, as, of course, ours are.

Above all else, as we look at India, we think we know what kind of country India will be a generation from now. It's going to be a country like the United States—multiethnic and multireligious and multilingual—and it will be a democracy. It will be a—it will be a country that is built on the rule of law and individual freedom. And that is a great assurance to provide the bedrock or the foundation of any strategic relationship.

We're here as part of the beginning of a consultative process with the Congress, and we are determined to work very closely with the Congress as we proceed through these rather complex and difficult negotiations. When the President and Prime Minister agreed, on July 18, on the many, many joint ventures, including this nuclear deal between the two countries, we determined that we obviously would need to negotiate the implementation of these agreements, especially the nuclear agreement, with the Indian Government.

And Bob and I testified before the House International Relations Committee in September. Since then, as you said, Mr. Chairman, I know that Secretary Rice has had a chance to brief the leaders of both the Senate and the House, in general, on this arrangement. She's eager to engage with you in more detailed discussions, herself, on our South Asia policy, more broadly, and on this particular initiative, more specifically.

We've had extensive briefings with the House and Senate staff. We even invited members of the House staff to attend with us the Nuclear Suppliers Group meeting in Vienna 2 weeks ago.

So, in short, we believe we've shared with the Congress the basics of our rationale for the July 18 agreement, and we intend to proceed in that fashion in the months ahead.

We cannot go forward on this initiative without the express authorization of the Congress. The advent of full United States civil nuclear cooperation with India would require a change in United States law, and that is the responsibility, not of the executive branch, but of the legislative branch.

Based on my visit to New Delhi 2 weeks ago, it's clear to us that it's going to take some time for the Indian Government to fulfill all the commitments it made to us in the July 18 agreement. The actions India agreed to take are difficult, and they're complex, and they're time consuming. And our administration, thus, believes that it would—it's better to wait before we ask Congress to consider any required adjustments in law until India is further along in taking these necessary steps to fulfill our agreement. And it may be, although it's very hard to predict this, that the Indians won't be ready to have—they won't have taken all these steps until the first part of 2006. It could be February or March or April.

Our judgment is: It wouldn't be wise or fair to ask Congress to make such a consequential decision without evidence that the Indian Government was acting on what is arguably the most important of its obligations, and that's the separation of its civilian and military nuclear facilities.

I told the Indian leadership in Delhi, 2 weeks ago, that they must craft a credible and transparent plan, and have begun to implement it—this is the separation plan—before the administration would request congressional action. And my counterpart, Foreign Secretary Shyam Saran, assured me that the Indian Government will produce such a plan.

As India begins to meet its obligations under the—our agreement, we would propose appropriate language that, in our view, might best be India-specific and would demonstrate our dedication to fulfilling the July 18 agreement. I have invited Foreign Secretary Saran to come to Washington to continue these implementation negotiations in December, and I'll be returning to Delhi in January. We will, of course, keep the Congress fully apprised of all of these discussions, and we're ready to come and brief and talk, on an informal basis or a formal way, whichever is better for you.

Mr. Chairman, you posed four questions to us. Senator Biden posed more questions to us, and let us see if we can answer some of them. And I know we won't fulfill that in our opening statements, but we're happy to take your questions.

When Secretary Rice set out on her first trip to India last spring, she had in mind the development of a broad strategic relationship, a partnership with India. And she knew, and we knew, that we would have to deal with the one issue that had bedeviled United States-India relations for the last 30 years, and that's the nuclear issue. We determined from the start that we could not recognize India as a nuclear weapons state. Such a step would weaken, fundamentally, the Nuclear Non-Proliferation Treaty. It would be logi-

cally inconsistent with the policy of the last seven American Presidents.

It was equally clear that India would not become a party to the NPT as a nonnuclear weapons state. We also knew that we would have to confront the more difficult and complex issue of whether to work with India on full civil nuclear cooperation. India had made this a central issue in the new partnership developing between our two countries. And, as you know, past administrations had decided to forego such cooperation with India due to India's nuclear weapons program and its status outside the nonproliferation regime. We had to decide whether this policy remained consistent with American interests in building a strong nonproliferation regime, and with our obvious interest in building a new across-the-board strategic relationship.

Because India had developed nuclear weapons outside the regime, we had no existing cooperation between our civil nuclear energy industries, and, as such, no real influence on India's adherence to the critical international safety and proliferation standards that are the bedrock of the international regime.

And while not formally part of the NPT regime, India has demonstrated a strong commitment to protect fissile materials and nuclear technology. Indeed, India has upheld an important obligation undertaken by all NPT members in resisting proposals for nuclear cooperation with nuclear aspirants that could have had adverse implications for international security.

We weighed the pros and cons, frankly, of whether or not to seek changes to U.S. policy and to ask Congress for authorization to begin full cooperation in this field. And we decided that it was in the American interest to bring India into compliance with the standards and practices of the international nonproliferation regime. And we decided that the only way to reach that goal was to end India's isolation and begin to engage it. India will soon have the largest population in the world, and we thought to consign it to a place outside that system did not appear to be strategically wise. And that isolation had not been effective. Without such an agreement, India, with its large and sophisticated nuclear capabilities, would continue to remain unregulated by international rules governing commerce in sensitive nuclear and nuclear-related technologies. With the agreement, and especially given India's track record in stemming the proliferation of its nuclear technology, the United States and the international community will benefit by asking India to open up its system to submit to international inspections and to safeguards in its civil facilities, and to take the steps necessary to separate civilian and military nuclear facilities. In other words, we would be asking India to come into effective compliance with international standards.

This agreement, then, is about the formation of a much more effective partnership between India and the United States on nonproliferation for the first time in 30 years. India is going to assume, if this agreement is implemented, the same responsibilities as other nations with civil nuclear energy, and will protect against diversion of items to India's nuclear weapons program or to other countries.

United States-Indian cooperation on nuclear energy will, therefore, help strengthen the international order in a way that advances widespread international equities in nuclear nonproliferation. It will also allow India to develop, much more quickly, its own civilian nuclear power industry, thus reducing demand in the world energy market, and by the use of clean fuel, clean nuclear energy.

Mr. Chairman, I should tell you this was not an easy choice. The construct that I just reviewed with you was essentially a sense of the pros and cons as Secretary Rice and her senior officials weighed them. We concluded we had a better chance to have India meet international standards if we engaged it, rather than isolated it. And we believe that the July 18 agreement advances our strategic partnership and is a net gain for nonproliferation. And we do not plan to offer such cooperation to any other country. I think that answers one of Senator Biden's questions.

India is, in effect, for us, a unique case. Unlike North Korea, unlike Iran, it remained—it never adhered to the NPT; it pursued nuclear weapons outside the NPT. But it's now prepared to comply with the restrictions and safeguards on its civil nuclear program. That, to us, is a distinct advantage.

There are other benefits here. There are security benefits. India's September vote in the IAEA that joined with the United States and other countries in finding Iran not in compliance with its international obligations reflects that India is beginning to think of its global role differently, and that India—the United States-Indian conversation on this issue is at an impact. And I should give some credit here to the Congress. When Bob and I testified in September before the HIRC, Congressman Lantos and Chairman Hyde and others made it abundantly clear that if India acted to somehow protect Iran in this issue of whether or not Iran should have a nuclear weapons capability, then those Members of Congress said they could not support this civil nuclear agreement. India has acted. And we have every reason to believe that India's vote in September is a permanent change in Indian policy.

There are environmental benefits to this that I have spoken about. There are certainly commercial benefits. As we seek to normalize commercial civil nuclear cooperation there are advantages to American companies, and there are opportunities for American jobs.

And there are energy benefits, because we have pledged to bring India into the International Thermonuclear Experimental Reactor Program, which will help make the next generation of reactors safer and more efficient, and also to have it become a member of the Generation IV Forum.

Mr. Chairman, let me just conclude, because I don't want to read the rest of my testimony, that in addition to this civil nuclear energy deal, President Bush was able to negotiate a wide range of initiatives—joint-venture initiatives—that we've never undertaken before with the Indian Government. And we believe these are consequential for American interest: A new defense relationship, broader work on trade and investment—in fact, our trade relationship has expanded several times over in the last 4 or 5 years; science and technology research cooperation, space launch and space research cooperation; a return to agricultural cooperation of

the type that we had, as many will remember, in the 1950s and 1960s, at the beginning of this relationship, after Indian independence; and, interestingly, a commitment by the Indians to work with us to promote democracy worldwide. That kind of thing didn't happen when the nonaligned movement and the aligned West were often at ideological odds during the cold war. But India's agreement and its sponsorship of a U.N. democracy fund with President Bush is an indication that the Indians are thinking differently about their global role, as is their joint sponsorship with us of HIV/AIDS programs in Africa and other parts of the world.

So, we see a distinct advantage, not just from the nuclear agreement, but from this broader based strategic engagement that we've outlined, and we're happy to talk about any of those programs.

And I would just make one final point, Mr. Chairman. This is not a perfect relationship, by any means. We're still very different countries with different histories, and sometimes with different interests. But we seem to have a coincidence now of interests and views on the issues that are truly important: On nonproliferation, on the question of Iran's nuclear weapons program, on the promotion of democracy, on the need for stability and peace in Asia as we look toward strategic challenges there in the 21st century.

There are some remaining challenges and differences that we need to work out with the Indians. We hope that the Indians will join the Proliferation Security Initiative. They're really, I think, the only great partner of the United States, large partner, that has not elected to do that.

We hope very much that the Indians and our Government will cooperate better at the United Nations. We have tended, over the years, not to vote with each other on important issues at the Security Council. But as we increasingly find a coincidence of views together, we hope there will be a change in New York, and that we'll both support reform of the United Nations.

And, finally, India is a country that is critical to resolving some of the—some of the difficult and complex problems in South Asia: The question of the autocratic regime in Burma and its denial of human rights to its own people; the question of the problems in Nepal with the renunciation of the political party system by the King of Nepal in the—over the last half year; the problem of stability in Bangladesh. India can be helpful to the United States, and I think we can be helpful to India, on all of those questions. And we now are building this kind of cooperation across the board in South Asia, as well as globally, and that is a distinct departure from where we were even 5 or 10 years ago in this relationship.

So, I would just submit the rest of my testimony for the record, Mr. Chairman, but I wanted to give you a sense of the strategic prism through which we view this relationship.

Thank you.

[The prepared statement of Mr. Burns follows:]

PREPARED STATEMENT OF HON. R. NICHOLAS BURNS, UNDER SECRETARY FOR  
POLITICAL AFFAIRS, DEPARTMENT OF STATE, WASHINGTON, DC

#### INTRODUCTION

Mr. Chairman and members of the committee, thank you for inviting Under Secretary Joseph and me to discuss the current state of our relations with India and,

specifically the development of full civil nuclear energy cooperation between India and the United States. The July 18 visit of Indian Prime Minister Manmohan Singh to Washington marked a watershed in our ties with the world's most populous democracy.

President Bush's desire to transform relations with India is based on his conviction that, as he has said, "This century will see democratic India's arrival as a force in the world." We believe it is in our national interest to develop a strong, forward-looking relationship with India as the political and economic focus of the global system shifts toward Asia. We know that many in Congress embrace this view. And the time is right. The cold war, when India was the ultimate nonaligned nation and the United States the ultimate aligned nation, is long past. It is time to shift our United States-India relationship to a new, strategic partnership for the decades ahead.

India is a rising global power with a rapidly growing economy. Within the first quarter of this century, it is likely to be included among the world's five largest economies. It will soon be the world's most populous nation, and it has a demographic distribution that bequeaths it a huge, skilled, and youthful workforce. India's military forces will continue to be large, capable, and increasingly sophisticated. Just like our own, the Indian military remains strongly committed to the principle of civilian control. Above all else, we know what kind of country India will be decades from now. Like the United States, India will thrive as a multiethnic, multireligious and multilingual democracy, characterized by individual freedom, rule of law and a constitutional government that owes its power to free and fair elections.

Under Secretary Joseph and I are here as part of a consultation process with both Houses of Congress to seek eventually the adjustment of United States laws to accommodate civil nuclear trade with India. We are at the very beginning of that process. We will work closely with Congress to determine the best way ahead.

Since President Bush agreed with Prime Minister Singh on this nuclear initiative on July 18, we have discussed with many of you individually where best to begin the decisionmaking process with Congress. Both of us testified before the House International Relations Committee in September. Secretary Rice has briefed the Senate and House leadership on this initiative. She is eager to engage with you in more detailed discussions in the coming months. We have already had extensive briefings of House and Senate staff, and we even invited House staff to attend with us the meeting of the Nuclear Suppliers Group in Vienna 2 weeks ago dealing with the Indian civil nuclear issue. In short, we have shared with the Congress our rationale for the July 18 agreement and have consulted consistently and in detail on our discussions with the Indian Government since that time.

Secretary Rice, Under Secretary Joseph, and I look forward to continuing this dialog. We recognize that the pace and scope of the initiative requires close consultation with Congress and we welcome your suggestions and advice as we move forward.

Indeed, we cannot go forward on this initiative without the express consent of Congress. The advent of full United States civil nuclear cooperation with India requires adjustments in United States law. I had the privilege of negotiating the July 18 agreement for the United States and remain the principal negotiator with the Indian Government. Based on my visit to New Delhi 2 weeks ago, it is clear that it will take some time for the Indian Government to fulfill all of the commitments it made in the July 18 agreement. The actions India committed to undertake are difficult, complex and time consuming. The administration thus believes it is better to wait before we ask Congress to consider any required legislative action until India is further along in taking the necessary steps to fulfill our agreement. I believe that will likely be in early 2006.

Our judgment is that it would not be wise or fair to ask Congress to make such a consequential decision without evidence that the Indian Government was acting on what is arguably the most important of its commitments—the separation of its civilian and military nuclear facilities. I told the Indian leadership in Delhi 2 weeks ago that it must craft a credible and transparent plan and have begun to implement it before the administration would request congressional action.

My counterpart, Foreign Secretary Shyam Saran, assured me that the Indian Government will produce such a plan. He stressed last week to a domestic audience at the New Delhi-based Institute of Defense Studies and Analyses, "It makes no sense for India to deliberately keep some of its civilian facilities out of its declaration for safeguards purposes, if it is really interested in obtaining international cooperation on as wide a scale as possible. As India begins to meet its commitments under our agreement, we will propose appropriate language that would be India-

specific and would demonstrate our dedication to a robust and permanent partnership.”

I have invited Foreign Secretary Saran to Washington in December to continue our talks, and I intend to return to India in January to further our understanding of India’s plans to separate its civil and military nuclear facilities. We will, of course, keep the Congress fully apprised of all these discussions. We hope very much that India can make the necessary progress to allow us to refer legislation to Congress by early 2006.

#### THE CIVIL NUCLEAR COOPERATION INITIATIVE

Mr. Chairman, you requested that we answer three questions in this hearing: First, why is it necessary to draw closer to India; second, how would United States concerns about India’s nonproliferation policies be addressed by this agreement; and, third, will our proposed policy change apply to countries other than India? Under Secretary Joseph and I will respond to each of your questions.

When Secretary Rice set out last spring to develop the structure of such a partnership, we knew we would have to deal with the one issue that has bedeviled United States-India relations for the last 30 years—the nuclear issue.

We determined from the start that we could not recognize India as a nuclear weapons state. Such a step would weaken fundamentally the nuclear Nonproliferation Treaty (NPT) and would be logically inconsistent with U.S. policy under the last seven American Presidents. It was equally clear that India would not become a party to the NPT as a nonnuclear weapons state.

We also knew that we would have to confront the more difficult and complex issue of whether to work with India on full civil nuclear cooperation. India had made this the central issue in the new partnership developing between our countries. As you know, past administrations had decided to forgo such civil cooperation with India due to India’s nuclear weapons program and its status outside the nonproliferation regime. We had to decide whether this policy remained consistent with U.S. interests in building a strong nonproliferation regime and with our obvious priority of improving relations with the world’s largest democracy.

Because India developed nuclear weapons outside the regime, we had no existing cooperation between our civil nuclear energy industries and, as such, no real influence on India’s adherence to the critical international nonproliferation standards that are the bedrock of our efforts to limit the spread of nuclear technology. While not formally part of the NPT regime, India has demonstrated a strong commitment to protect fissile materials and nuclear technology. Indeed, as other responsible countries with advanced nuclear technology, India has resisted proposals for nuclear cooperation with nuclear aspirants that could have had adverse implications for international security.

We weighed the pros and cons of whether or not to seek changes to U.S. policy and ask Congress for authorization to begin full civil nuclear energy cooperation.

We decided that it was in the American interest to bring India into compliance with the standards and practices of the international nonproliferation regime. And, we decided that the only way to reach that goal was to end India’s isolation and begin to engage it. India will soon have the largest population in the world, and to consign it to a place outside that system did not appear to be strategically wise and has not proven effective.

Without such an agreement, India, with its large and sophisticated nuclear capabilities, would continue to remain outside the international export control regimes governing commerce in sensitive nuclear and nuclear-related technologies. With this agreement, given India’s solid record in stemming and preventing the proliferation of its nuclear technology over the past 30 years, the United States and the international community will benefit by asking India to open up its system, to separate its civil and military nuclear facilities, and to submit to international inspections and safeguards on its civil facilities, thus allowing it to bring its civil nuclear program into effective conformity with international standards.

India will assume the same nonproliferation responsibilities as other responsible nations with civil nuclear energy and will protect against diversion of items either to India’s weapons program or to other countries. United States-Indian cooperation on nuclear energy will therefore help strengthen the international order in a way that advances widespread international equities in nuclear nonproliferation. It also will allow India to develop much more quickly its own civilian nuclear power industry, thus reducing demands on the world energy market and in a way that provides clean energy for the future.

This was not an easy choice. We do not live in an ideal world. We concluded we had a better chance to have India meet international nonproliferation standards if

we engaged rather than isolated it. We believe the resulting agreement advances our strategic partnership and is a net gain for nonproliferation. We do not plan to offer such cooperation to any other country.

In addition to aligning ourselves with a country that shares our democratic values and commitment to a multiethnic, multireligious society, developing civil nuclear cooperation with India will bring concrete benefits to the United States and to the international community more broadly. Under Secretary Joseph will address this initiative in detail, but let me outline here some of the key reasons why we believe this initiative makes excellent sense:

- **Security Benefits:** All the steps that India pledged on July 18 strengthen the international nonproliferation regime, and all align with our efforts to prevent the spread of weapons of mass destruction. India's September vote in the International Atomic Energy Agency (IAEA) that found Iran in noncompliance with its nuclear obligations reflects India's coming of age as a responsible state in the global nonproliferation mainstream.
- **Environmental Benefits:** Nuclear energy is one of the few proven sources of energy that does not emit greenhouse gases, and thus can help India modernize in an environmentally friendly manner that does not damage our common atmosphere and contribute to global warming.
- **Commercial Benefits:** As a result of our involvement in India's civil nuclear industry, United States companies will be able to enter India's lucrative and growing energy market, potentially providing jobs for thousands of Americans.
- **Energy Benefits:** India's expertise in basic science and applied engineering will add significant resources and substantial talent in the development of fusion as a cheap energy source if India can participate in the International Thermonuclear Experimental Reactor (ITER) program and help make the next generation of reactors safer, more efficient and more proliferation-resistant as a member of the Generation IV Forum (GIF).

#### THE BROADER RELATIONSHIP

Although our civil nuclear initiative has garnered the most attention, it is only part of a much broader and deeper strategic partnership with India, something that has not really been possible until now.

In late June, Defense Minister Pranab Mukherjee and Secretary of Defense Donald Rumsfeld signed a New Defense Framework that will guide our defense relations for the next decade. We're planning to enlarge defense trade, improve cooperation between our Armed Forces, and coproduce military hardware. The brilliant cooperation of our two militaries during the response to the tsunami disaster last December was a remarkable testament to how far we have come, and the great potential we have for the future.

A strong, democratic India is an important partner for the United States. We anticipate that India will play an increasingly important leadership role in 21st century Asia, working with us to promote democracy, respect for human rights, economic growth, stability and peace in that vital region. By cooperating with India now, we accelerate the arrival of the benefits that India's rise brings to the region and the world. By fostering ever-closer bilateral ties, we also eliminate the possibility that our two nations might overlook their natural affinities and enter into another period of unproductive estrangement as was so often the case during the cold war period. By challenging India today, with a full measure of respect for its ancient civilization, traditions, and accomplishments, we can help it realize its full potential as a natural partner in the struggle against the security challenges of the coming generation, and the global threats that are flowing over, under, and through our respective national borders.

I visited New Delhi 2 weeks ago and held an extensive series of discussions with senior Indian officials on the range of our foreign policy interests. While there, I had broad-ranging discussions on many issues, everything from HIV/AIDS to the situation in Nepal to our concerns about Iran. The July 18 Joint Statement calls for government-to-government joint cooperation in many areas, including civil nuclear cooperation; a United States-India Global Democracy Initiative; an expanded United States-India Economic Dialogue focusing on trade, finance, the environment, and commerce; continued cooperation in science and technology; an Energy Dialogue to strengthen energy security and promote stable energy markets, an Agricultural Knowledge Initiative, an Information and Communications Technology Working Group; Space Cooperation; a United States-India Disaster Response Initiative; and the United States-India HIV/AIDS Partnership. Foreign Secretary Saran and I have already begun working on the joint ventures that the President and Prime Minister Singh had asked us to undertake and plan to further our cooperation in the fields

of education, in agriculture, in science and technology, and in space. We very much would like to welcome an Indian astronaut to fly on the space shuttle. I think it is clear that our interests converge on all these issues. With this ambitious agenda, our two countries are becoming, in effect, global partners.

Cooperation in several of these areas has already begun and is yielding results. Just last month, the United States-India Treaty on Mutual Legal Assistance in Criminal Matters entered into force, providing for enhanced, streamlined and more effective law enforcement cooperation between our two countries. On October 17, Secretary Rice and Indian Science and Technology Minister Sibal signed an umbrella Science and Technology Agreement that will strengthen United States and Indian capabilities and expand relations between the extensive scientific and technological communities of both countries. This agreement includes a substantive Intellectual Property Rights (IPR) provision—another indication of India's increasing recognition of the need to respect intellectual property.

#### THE CHALLENGES WE FACE

We have accomplished much, but we have just scratched the surface of our partnership with India. Ambassador Mulford and his outstanding team in New Delhi, aided by frequent high-level visitors to the subcontinent over the next several months, will continue to pursue this expanding agenda.

We want the United States and India to work together more effectively than we have in the past to become more effective global partners. Let me provide a few examples. On the political side of the ledger, we will be seeking early tangible progress with India toward:

- Creating a closer United States-India partnership to help build democratic institutions in the region and worldwide. During the Prime Minister's visit to Washington, our two leaders agreed for the first time to work together to promote democracy worldwide. Both countries have contributed to the U.N.'s Democracy Fund. We will seek ways to work together in strengthening democratic institutions and practices in specific countries. India's experiment in democracy has been a success for over half a century, and its 2004 national polls were the largest exercise in electoral democracy the world has ever seen. We share a belief that democracy and development are linked, that effective democratic governance is a precondition to healthy economic development. In this regard, we hope India will share its democratic experience with central Asian nations, which are having a difficult time making the transition from authoritarianism to democracy, and assist them in building institutions necessary to the success of democracy and the advancement of human rights.
- Advancing our shared interest in reform at the United Nations. Members of this committee know well the President's deep desire to promote reform at the United Nations. This is a top priority for this administration, and India as well. We want a far more vigorous Indian engagement with us in the ongoing process of reforming the United Nations into an organization that serves the interests of its members. I think both our countries would agree that this process should neither be politicized nor subjected to the sort of country bloc calculations that prevailed during the cold war. India has much to offer in moving reform efforts ahead.
- Indian participation in the Proliferation Security Initiative. India boasts one of the world's largest commercial maritime fleets and a navy that demonstrated its rapidly growing expeditionary capacity in responding to the December tsunami. Indian support for the multinational Proliferation Security Initiative (PSI) would be a boon to the participating nations' goal of tracking and interdicting dangerous terrorist and weapons of mass destruction (WMD) cargoes worldwide. We hope India will choose to join PSI.
- United States-India cooperation for regional peace and stability. India is one of the largest international donors to Afghanistan's reconstruction and works closely with us in the areas of road construction, public health, education, telecommunications, and human resource development. India and the United States share the goal of a return to democracy in Nepal and a defeat of the Maoist insurgency. In Sri Lanka, we both support the government's efforts to recover from the tsunami and return to the peace process. We should do more to promote human rights and democracy in autocratic Burma. Our two countries should work more closely to promote peace and stability in Asia.
- Convincing Iran to return to negotiations. India and the United States have found an increasingly positive dialog on Iran. We are both dedicated to the goal of an Iran that lives in harmony in its region, ends support of terrorist groups and does not seek nuclear weapons. We welcomed India's vote with us at the

IAEA in September to find Iran in noncompliance with its international obligations. We appreciate India's belief that Iran should not acquire a nuclear weapons capability, and India's continuing cooperation with the United States and Europe is essential to convince Iran to return to negotiations.

We and India also need to focus on a number of important economic challenges, both bilateral and global. Since the early 1990s, India has progressed far in liberalizing its tariff regime and investment environment, and these major changes have fueled the growth and increased prosperity of recent years. Any quick survey of India's economic landscape provides thousands of examples of innovation and excellence. India is increasingly a global competitor in knowledge-based industries such as information and communications technology and biotechnology research and development.

Despite its impressive record of economic growth during the last decade, India still struggles with many of the persistent challenges faced by developing countries: Insufficient and underdeveloped infrastructure, inefficient markets for goods and services, and minimal access of credit and capital among the urban and rural poor. In addition, India also suffers from a shortage of foreign capital and investment, which can bring in key, new technologies, create jobs, and modernize industries.

In this new partnership, the United States and India have a great opportunity to work together to overcome these challenges, toward the continued prosperity of our peoples, and to play a positive role in shaping the world's economic future. The ongoing negotiations in the World Trade Organization (WTO) in the Doha Development Round offer the perfect opportunity to work on our shared goals of trade, development, and prosperity.

Both India and the United States stand to gain from the increasing liberalization of trade in goods and services, and in convincing our trading partners to do the same. There is no reason why India and the United States should not be partners in this forum, whose success is so crucial to our common future. We plan to work closely with India on proposals that can translate the promise of the WTO's mission—and the new era of United States-India relations—into reality. This effort will take hard work on both sides, and we look forward to this opportunity to engage India seriously, to the economic betterment of both our people.

As we build closer economic relations, we look forward to India's agreement to purchase American civil and military aircraft and to open its doors further to trade with our country.

#### BUILDING PEOPLE-TO-PEOPLE AND PRIVATE SECTOR COOPERATION BETWEEN INDIA AND THE UNITED STATES

The new United States-India partnership is not and cannot be just between governments. We have seen an equally powerful expansion of our people-to-people ties and business growth. The immense power of the India-United States people-to-people network goes deeper than anyone could have ever imagined. We find thousands of Americans in Delhi, in Mumbai and Bangalore, and even more Indians in New York, Washington, and Los Angeles. Over 85,000 Americans are living in India, lured by its growing economy and the richness of its culture. There are 2 million persons of Indian origin in the United States, citizens and legal permanent residents. They are operating businesses in our country, running for political office, and building bridges back to India. There are more Indian students in the United States today than from any other country in the world—80,000.

We have, in essence, the development of a true, comprehensive, across-the-board engagement between India and the United States, our governments, our societies, and our peoples. This engagement by individuals and businesses will propel and sustain the formal ties between our governments.

#### CONCLUSION

I am pleased to have had the opportunity to share with you the many elements of this strategic transformation that we are witnessing in the United States-India relationship. Both President Bush and Prime Minister Singh have shown the confidence and vision to pursue a common vision for the world together. We hope the Congress will help us make that vision a reality.

The CHAIRMAN. Well, thank you very much, Secretary Burns, for your very comprehensive testimony. We appreciate that.

Secretary Joseph, would you proceed?

**STATEMENT OF HON. ROBERT G. JOSEPH, UNDER SECRETARY  
FOR ARMS CONTROL AND INTERNATIONAL SECURITY, DE-  
PARTMENT OF STATE, WASHINGTON, DC**

Mr. JOSEPH. Mr. Chairman, Senator Biden, Senator Hagel, it is an honor to appear before you today to discuss the President's policy on India and to address the very legitimate and very important questions that have been raised.

I, also, will not read my prepared remarks, but will submit them for the record. But I would like to make three introductory points.

First, working toward full civil nuclear cooperation with India is not a case of strategic interests or power politics trumping nonproliferation principles. The agreement, reached by President Bush and Prime Minister Singh in July, seeks to develop full civil nuclear cooperation as a component of our broader relationship with India, while, at the same time, strengthening the nuclear nonproliferation regime. In other words, this is not a zero-sum tradeoff whereby gains in the strategic partnership with India result in nonproliferation losses. Countering proliferation is a core national security objective of this administration. We believe that it's in our interest to establish a broad strategic partnership with India, and nonproliferation is a key objective we intend to advance in the context of that enhanced relationship. So, our two goals are not in conflict, but, rather, are reinforcing.

With the Joint Statement, India has agreed to take on key commitments that align it more firmly with the nuclear nonproliferation mainstream than at any previous time. The commitments that India takes on in the Joint Statement, as you have outlined, Mr. Chairman, are meaningful. And India's implementation of these commitments will, on balance, enhance our global nonproliferation efforts and strengthen the nuclear nonproliferation regime.

Since his first days in office, the President has made non- and counter-proliferation top national security priorities. This has not, and this will not, change. One characteristic of this administration's approach to preventing and protecting against WMD proliferation is the willingness and the determination to pursue new and pragmatic approaches that address real-world problems. There is no viable cookie-cutter approach to nonproliferation. We need to be both creative and determined. We need to adjust our approaches to take into account the conditions that exist, so that we can effectively combat weapons of mass destruction. It is this determination, it is this willingness, to undertake the task of non- and counter-proliferation differently that has produced such results as the G-8 Global Partnership, U.N. Security Council Resolution 1540, and the Proliferation Security Initiative.

In the case of India, we must pursue approaches that recognize India as a growing 21st century power, one that shares our democratic values, has substantial and growing energy needs, and has long possessed nuclear weapons outside of the NPT. Status-quo approaches neither acknowledge these pragmatic considerations, nor have they achieved the positive outcome of integrating India into the international nuclear nonproliferation mainstream.

As the Joint Statement is implemented, I believe it will prove to be a win for our bilateral strategic relationship, a win for our energy security, and a win for our nonproliferation objectives.

Based on our consultations to date with the Nuclear Suppliers Group, which met in mid-October, this prospect is generally understood. Some states, such as Sweden and Switzerland, have expressed severe reservations, for fear of undermining the NPT. Others, such as the United Kingdom and France, have expressed strong support, arguing that this is the right move at the right time. Most have adopted a wait-and-see approach, recognizing the need to come to terms with India and not allowing it to remain outside the international nonproliferation system. They welcome the steps that India has agreed to take in the context of the Joint Statement. At the same time, they have made very clear that their support will depend on the scope, and on the pace, of India's actions.

Second, the key to success is India's timely and effective implementation of its agreed commitments. I would underscore that implementing the Joint Statement will, in some cases, prove very challenging and will take time to realize fully. For example, developing an appropriate civil-military separation will be complex and time consuming. India has not yet presented a plan, and we have underscored that the nature and completeness of this plan will be critical in building support within the Nuclear Suppliers Group and here in Washington. The separation of civil and military facilities must be both credible and transparent.

We have encouraged India to make a comprehensive declaration of its civil infrastructure, and have discussed some straightforward principles. For example, a credible plan must ensure that we, and other potential suppliers, can meet our obligations under the Non-Proliferation Treaty, so safeguards must be applied in perpetuity. Moreover, any separation plan must ensure, and the safeguards must confirm, that cooperation does not in any way assist in the development or production of nuclear weapons. Nuclear materials in the civil sector simply must remain in the civil sector.

Many of our international partners have expressed strong views that India's separation plan be meaningful and have noted the importance of IAEA safeguards being applied to India's civil facilities. Several states have argued that it is integral to maintaining the integrity of the global regime that India not be granted *de jure* or *de facto* status as a nuclear weapon state. For this reason, many have indicated that a so-called "voluntary offer arrangement," of the type that is in place with the five nuclear weapon states, would not be acceptable for India. Neither would we view such an arrangement as defensible from a nonproliferation standpoint.

Third, Mr. Chairman, we would urge both Congress and our international partners to avoid the temptation to renegotiate the deal. Some observers, both in the United States and abroad, have argued that the United States-India agreement does not represent the maximum gain we might have achieved. According to this view, we, presumably the United States Congress, should condition approval of the agreement on additional Indian steps, such as implementing a moratorium on fissile material production, ratifying the Comprehensive Test Ban Treaty, and/or joining the NPT as a non-nuclear weapon state. Based on our interactions with the Indian Government, we believe that such additional conditions would likely prove to be deal-breakers.

This is a case where the perfect is the enemy of the good, and we must resist the temptation to pile on conditions that will prejudice our ability to realize the important nonproliferation objectives that are already embedded in the Joint Statement.

In our view, it would be better to lock in this agreement and then seek to achieve further results in our continuing nonproliferation dialog with India. We are much better off with India undertaking the commitments it has now agreed to, rather than allowing status-quo stalemates to prevail.

We believe that this is a sound arrangement, and one that should be supported, because the commitments India has made will, when they are implemented, bring it into greater alignment with international nuclear nonproliferation standards and practices, and, as such, will strengthen the global nonproliferation regime.

The NPT is not a perfect instrument, as we have seen with North Korea and with Iran. As an administration, we are endeavoring to strengthen the regime, including principal components such as the IAEA and the Nuclear Suppliers Group, through the types of proposals that the President made in February 2004, including advancement of the Additional Protocol, the creation of a special IAEA Committee on Verification, and the end to the transfer of sensitive enrichment and reprocessing technologies to states that do not have a fully functioning capability.

Bringing India closer to the regime, in terms of its actions, will contribute to this goal. This was demonstrated, I believe, at the IAEA Board of Governors meeting in September, when Delhi took the important step of voting with the majority to find Iran in formal noncompliance.

In conclusion, we look forward to working with you over the months ahead to bring this important objective to a timely and successful outcome. As Under Secretary Burns noted, we do not intend to ask Congress to take legislative action until the Indian Government takes certain implementation steps. We welcome your partnership as we embark on this effort, and we look forward to working with your committee, together with your House counterparts, as we jointly consider the best way forward in this legislative area.

Thank you very much.

[The prepared statement of Mr. Joseph follows:]

PREPARED STATEMENT OF HON. ROBERT G. JOSEPH, UNDER SECRETARY FOR ARMS CONTROL AND INTERNATIONAL SECURITY, STATE DEPARTMENT, WASHINGTON, DC

Chairman Lugar, Senator Biden, distinguished members of the committee, it is an honor to appear before you today to discuss the President's policy toward India with respect to civil nuclear cooperation. I look forward to working with you over the months ahead to bring this important objective to a timely and successful outcome.

#### TOWARD UNITED STATES-INDIA CIVIL NUCLEAR COOPERATION

We believe it is in our national security interest to establish a broad strategic partnership with India that encourages India's emergence as a positive force on the world scene. Our desire to transform relations with India is founded upon a contemporary and forward-looking strategic vision. India is a rising global power and an important democratic partner for the United States. Today, for the first time, the United States and India are bound together by a strong congruence of interests and values. We seek to work with India to win the global War on Terrorism, to prevent

the spread of weapons of mass destruction and the missiles that could deliver them, to enhance peace and stability in Asia, and to advance the spread of democracy. India and the United States are on the same side of these critical strategic objectives. Our challenge is to translate our converging interests into shared goals and compatible strategies designed to achieve these aims.

In the context of this growing partnership, the United States and India reached a landmark agreement in July to work toward full civil nuclear cooperation while at the same time strengthening the nuclear nonproliferation regime. The Joint Statement agreed to by President Bush and Prime Minister Singh is not—as some have argued—a triumph of power politics over nonproliferation principles. This is not a zero-sum trade-off, whereby improvement in our bilateral strategic relationship results in nonproliferation losses. Rather, as the broadly constituted Joint Statement is implemented, it will prove a win for our strategic relations, a win for energy security, and a win for nonproliferation.

India believes, and our administration agrees, that it needs nuclear power to sustain dynamic economic growth and to address its growing energy requirements in an affordable and environmentally responsible manner. Our goal—in the context of the Joint Statement—is to provide India access to the technology it needs to build a safe, modern and efficient infrastructure that will provide clean, peaceful nuclear energy.

At the same time, India has clearly demonstrated over the past several years its desire to work with the United States and the international community to fight the spread of sensitive nuclear technologies. As part of an effort launched with India during the administration's first term—the Next Steps in Strategic Partnership—India took a number of significant steps to strengthen export controls and to ensure that Indian companies would not be a source of future proliferation. Not only did India pledge to bring its export control laws, regulations, and enforcement practices in line with modern export control standards, but also passed an extensive export control law and issued an upgraded national control list that will help it achieve this goal. In addition, India has become a party to the Convention on the Physical Protection of Nuclear Material and has taken significant steps toward meeting its obligations under UNSCR 1540.

The additional nonproliferation commitments India made as part of the Joint Statement go even further and, once implemented, will bring it into closer conformity with international nuclear nonproliferation standards and practices. This is a very important move for India and for the nonproliferation community. While we will continue to work with India and to encourage it to do more over time, India's implementation of its commitments will, on balance, enhance our global nonproliferation efforts. We expect the international nuclear nonproliferation regime will emerge stronger as a result.

As evidence of this expectation, we note with satisfaction India's positive IAEA Board of Governors vote in September on Iranian noncompliance, and look forward to further cooperative action on this critical international security issue.

#### NONPROLIFERATION GAINS

Through the Joint Statement, India has publicly committed to a number of important nonproliferation steps. It will now:

- Identify and separate civilian and military nuclear facilities and programs and file a declaration with the International Atomic Energy Agency (IAEA) regarding its civilian facilities;
- Place voluntarily its civilian nuclear facilities under IAEA safeguards;
- Sign and adhere to an Additional Protocol with respect to civilian nuclear facilities;
- Continue its unilateral moratorium on nuclear testing;
- Work with the United States for the conclusion of a multilateral Fissile Material Cut-Off Treaty (FMCT) to halt production of fissile material for nuclear weapons;
- Refrain from the transfer of enrichment and reprocessing technologies to states that do not have them and support efforts to limit their spread; and
- Secure nuclear and missile materials and technologies through comprehensive export control legislation and adherence to the Missile Technology Control Regime (MTCR) and Nuclear Suppliers Group (NSG).

India's commitment to separate its civil and military facilities and place its civil facilities and activities under IAEA safeguards demonstrates its willingness to assume full responsibility for preventing proliferation from its civil nuclear program. It will also help protect against diversion of nuclear material and technologies to India's weapons program.

By adopting an Additional Protocol with the IAEA, India will commit to reporting to the IAEA on exports of all NSG Trigger List items. This will help the IAEA track potential proliferation elsewhere, and bolster our efforts to encourage all states to adopt an Additional Protocol as a condition of supply.

By committing to adopt strong and effective export controls, including adherence to NSG and MTCR Guidelines, India will help ensure that its companies do not transfer sensitive weapons of mass destruction and missile-related technologies to countries of concern. In July, India took an important step by harmonizing its national control list with the NSG Guidelines and by adding many items that appear on the MTCR Annex.

India has also committed to work with the United States toward the conclusion of a multilateral FMCT, which, if successfully negotiated and ratified, will ban the production of fissile material for use in nuclear weapons or other nuclear explosive devices.

India's pledge to maintain its nuclear testing moratorium contributes to non-proliferation efforts by making its ending of nuclear explosive tests one of the conditions of full civil nuclear cooperation. Since to date Pakistan has test-exploded nuclear weapons only in response to Indian nuclear tests, this commitment will help diminish the prospects for future nuclear testing in South Asia.

By committing not to export enrichment and reprocessing technology to states that do not already have such fully functioning capabilities, India will help us achieve the goals laid out by President Bush in February 2004, designed to prevent the further spread of such proliferation sensitive equipment and technology. This will help close what is widely recognized as the most significant loophole in the Nuclear Non-Proliferation Treaty regime—a loophole that has clearly been exploited by countries such as North Korea and Iran and could be manipulated by others in the future.

Each of these activities is significant. Together, they constitute a substantial shift in moving India into closer conformity with international nonproliferation standards and practices. Their successful implementation will help to strengthen the global nonproliferation regime.

As befits a major, responsible nation, and in keeping with its commitment to play a leading role in international efforts to prevent WMD proliferation, we hope that India will also take additional nonproliferation-related actions beyond those specifically outlined in the Joint Statement. We view this as a key component of the developing United States-India strategic partnership and look forward to working with the Indian Government, as well as the international community more broadly, to further strengthen nonproliferation efforts globally.

Through our ongoing bilateral dialog we have already discussed with India such steps as endorsing the Proliferation Security Initiative Statement of Principles, bringing an early end to the production of fissile material for weapons, and harmonizing its control lists with those of the Australia Group and the Wassenaar Arrangement.

#### U.S. COMMITMENTS UNDER THE JOINT STATEMENT

On a reciprocal basis with India's commitments, the United States has committed to work to achieve full civil nuclear cooperation with India. In this context, President Bush told Prime Minister Singh that he would:

- Seek agreement from Congress to adjust U.S. laws and policies;
- Work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India; and
- Consult with partners on India's participation in the fusion energy International Thermonuclear Experimental Reactor (ITER) consortium and the Generation IV International Forum, the work of which relates to advanced nuclear energy systems.

To implement effectively the steps under the Joint Statement, we will need the active support of Congress and that of our international partners. We expect—and have told the Indian Government—that India's follow-through on its commitments is essential to success. We believe that the Government of India understands this completely and we expect them to begin taking concrete steps in the weeks ahead.

#### INTERNATIONAL RESPONSES TO DATE

Mr. Chairman, since the July statement, we have actively engaged with our international partners—both bilaterally and in such multilateral fora as the G-8 and the Nuclear Suppliers Group. I have met directly with my counterparts from many different countries. Secretary Rice and other senior U.S. officials discussed the initiative with states at the recent U.N. General Assembly and at IAEA General Con-

ference meetings. Assistant Secretaries Stephen Rademaker and Christina Rocca both traveled to Vienna to make presentations to the NSG Consultative Group. And, of course, many of our Embassies have been actively engaged on this front.

While some countries, such as Sweden, have expressed substantial doubts about the initiative for fear of inadvertent damage to the nuclear nonproliferation regime, others have expressed strong support. For example, the United Kingdom has “warmly welcome(d)” this initiative and indicated that on the basis of the Joint Statement it was “ready to discuss with our international partners the basis for cooperation in civil nuclear matters with India.” Similarly, France has underscored the “need for full international civilian nuclear cooperation with India.” The Director General of the IAEA has also welcomed India’s decision to place its civil nuclear facilities under safeguards and to sign and implement the Additional Protocol as “concrete and practical steps toward the universal application of IAEA safeguards.”

To date, many other countries have adopted a “wait-and-see” approach. Most recognize the need to come to terms with India and not to allow it to remain completely outside the international nonproliferation system. They welcome the nonproliferation steps India has committed to take in the context of the Joint Statement. At the same time, they have made clear that their ultimate support will depend on the scope and pace of India’s actions.

Some have understandably questioned how this complex initiative comports with the NPT and our efforts to combat WMD proliferation. Others have asked whether the provision of civil nuclear technology to India would be consistent with their obligations under the NPT not to contribute to India’s nuclear weapons program. Still others have asked why a cap on India’s production of fissile material for weapons was not part of the deal.

We have sought to clarify that the United States does not and will not support India’s nuclear weapons program. As it is for other states, this is a “red line” for us. We are obligated under the NPT not to assist India’s nuclear weapons program. Our initiative with India does not recognize India as a nuclear weapon state, and we will not seek to renegotiate the NPT, whether to change the treaty definition of a nuclear weapon state or in any other way. We remain cognizant of, and will fully uphold, all of our obligations under the Nuclear Non-Proliferation Treaty, and we remain committed in principle to universal NPT adherence.

But we also recognize that India is in a unique situation and has shown to be responsible in not proliferating its nuclear technologies and materials. With its decision to take the steps announced in the Joint Statement, India will now take on new nonproliferation responsibilities that will strengthen global nonproliferation efforts that serve the fundamental purpose of the NPT.

India has informed us that it has no intention of relinquishing its nuclear weapons or of becoming a party to the NPT as a nonnuclear weapon state, the only way it could adhere under the current terms of the treaty. Despite this, it is important to seize this opportunity to assist India in becoming a more constructive partner in our global nonproliferation efforts. Indian commitments to be undertaken in the context of the Joint Statement will align Delhi more closely with the nuclear nonproliferation regime than at any time previously. India has said it wants to be a partner and is willing to take important steps to this end. We should encourage such steps.

In this context, it is important to note that the NPT does not ban civil nuclear cooperation with safeguarded facilities in India, nor does it require full scope safeguards as a condition of supply. In fact, under the “grandfather” provision of the NSG Guidelines, Russia today is building two nuclear reactors in India.

The NPT does preclude any cooperation that would “in any way assist” India’s nuclear weapons program. For that reason, we have made clear that, under our proposal, supplier states will only be able to engage in cooperation with safeguarded facilities. Moreover, the more civil facilities India places under safeguards, the more confident we can be that any cooperative arrangements will not further any military purposes. We expect—and have indicated to the Government of India—that India’s separation of its civil and military nuclear infrastructure must be conducted in a credible and transparent manner, and be defensible from a nonproliferation standpoint. In other words, the separation and the resultant safeguards must contribute to our nonproliferation goals. Many of our international partners have similarly indicated that they view this as a necessary precondition, and will not be able to support civil nuclear cooperation with India otherwise. We believe that the Indian Government understands this.

With respect to the cessation of fissile material production, we continue to encourage India, as well as Pakistan, to move in this direction as part of our strategic dialogs with both governments. But we think it would be unwise to hold up the nonproliferation gains that can be obtained from the civil nuclear cooperation initiative

for an Indian fissile material cap. Moreover, in the context of the Joint Statement, we jointly committed to work toward the completion of an effective Fissile Material Cut-Off Treaty. As we have indicated previously, the United States also stands willing to explore other intermediate options that also might serve this objective.

As India completes the significant actions that it has committed to undertake in the Joint Statement, we are convinced that the nonproliferation regime will emerge stronger. Separately, we will continue to encourage additional steps, such as India's acceptance of a fissile material production moratorium or cap, but we will not insist on it for the purposes of the civil nuclear cooperation initiative announced by the President and Prime Minister. Even absent such a cap, the initiative represents a net gain for nonproliferation.

#### KEY CHALLENGES

Five key challenges face the successful achievement of Joint Statement implementation. These include: Developing a meaningful civil/military separation; negotiating the appropriate safeguards arrangement; building support within the NSG; avoiding the temptation to renegotiate the deal; and securing domestic legal reform.

*Developing a meaningful civil/military separation:* We have indicated that the separation of civil and military facilities must be both credible and transparent, as well as defensible from a nonproliferation standpoint. We have engaged in initial discussions with the Government of India, and look forward to further discussion of a mutually acceptable approach. While India has not yet presented a formal separation plan, we are encouraged by Foreign Secretary Saran's public acknowledgements both that "it is legitimate for our partners to expect that such cooperation will not provide any advantage to our strategic programme," and that "it makes no sense for India to deliberately keep some of its civilian facilities out of its declaration for safeguards purposes, if it really is interested in obtaining international cooperation on as wide a scale as possible."

In our discussions to date, and in particular during Under Secretary Burns' recent talks in Delhi, we have discussed some straightforward principles. I will not enumerate them fully here since the negotiations remain ongoing, but would like to underscore just a couple of these. For example, to ensure that the United States and other potential suppliers can confidently supply to India and meet our obligations under the NPT, safeguards must be applied in perpetuity. Further, the separation plan must ensure—and the safeguards must confirm—that cooperation does not "in any way assist" in the development or production of nuclear weapons. In this context, nuclear materials in the civil sector should not be transferred out of the civil sector.

*Negotiating the appropriate safeguards arrangement:* India's voluntary commitment to allow IAEA safeguards on its civil facilities is both a substantial nonproliferation gain and a key enabler for nuclear energy cooperation. A critical bellwether of Indian intentions will be how it handles the separation and safeguarding of its civil nuclear infrastructure. In our discussions with key international partners, both in the NSG context and otherwise, many have expressed strong views that India's separation plan be transparent and have noted the importance of IAEA safeguards being applied to its civil facilities.

In this context, several countries have argued that it is integral to maintaining the integrity of the global regime that India not be granted *de jure* or *de facto* status as a nuclear weapon state under the NPT. For this reason, many have indicated that a "voluntary offer" arrangement of the type in place in the five internationally recognized nuclear weapon states would not be acceptable for India. We indicated at the recent G-8 and NSG meetings that we would not view a voluntary offer arrangement as defensible from a nonproliferation standpoint or consistent with the Joint Statement, and therefore do not believe that it would constitute an acceptable safeguards arrangement. Such a course of action would in all likelihood preclude NSG support. Conversely, should India put forward a credible and defensible plan, we anticipate that many states will become more steadfast in their support.

*Building support within the NSG:* At the recent NSG Consultative Group meeting in Vienna, the United States discussed the initiative with regime members. We stressed our desire that the NSG maintain its effectiveness, and emphasized that we do not intend to undercut this important nonproliferation policy tool. For this reason, the U.S. proposal neither seeks to alter the decisionmaking procedures of the NSG nor amend the current full-scope safeguards requirement in the NSG Guidelines. Rather, the United States proposes that the NSG take a policy decision to treat India as an exceptional case, given its energy needs, its nuclear nonproliferation record, and the nonproliferation commitments it has now undertaken. We do not advocate similar treatment for others outside the NPT regime.

In our view, once India makes demonstrable progress in implementing key Joint Statement commitments—with a credible, transparent, and defensible separation plan foremost on the list—we will be ready to engage with our NSG partners in developing a formal proposal to allow the shipment of Trigger List items and related technology to India. Obviously, the number of facilities and activities that India places under IAEA safeguards, and the method and speed with which it does so, will directly affect the degree to which we will be able to build support for full civil nuclear cooperation. We look forward to discussing this more fully with NSG members at the Consultative Group meeting in early 2006 and at the plenary session that follows.

*Avoiding the temptation to renegotiate the deal:* Some observers—both in the United States and abroad—have argued that the United States-India arrangement as negotiated by the President and the Prime Minister does not constitute a net gain for nonproliferation, or at least does not reflect the maximum gain we might in theory have achieved. According to this view, the United States, presumably the United States Congress, should condition United States nuclear cooperation under the Joint Statement on additional Indian steps, such as implementing a moratorium on fissile material production, ratifying the Comprehensive Test Ban Treaty, and/or joining the NPT as a nonnuclear weapon state. Based on our interactions with the Indian Government, we believe that such additional conditions would likely be deal-breakers.

This is a case where the “perfect” is the enemy of the “good,” and we must resist the temptation to pile on conditions that will prejudice our ability to realize the important and long-standing nonproliferation objectives embodied in the Joint Statement. We are better off with India undertaking the commitments it has now agreed to rather than allowing the status quo to prevail.

The Joint Statement reached by President Bush and Prime Minister Singh is good both for India and for the United States, and offers a net gain for global nonproliferation efforts. Rather than layer on additional conditions or seek to renegotiate the Joint Statement, it would be better to lock in this deal and then seek to achieve further results in subsequent nonproliferation discussions. We believe that this is a sound arrangement that should be supported because the commitments India has made will, when implemented, bring it into closer alignment with international nuclear nonproliferation standards and practices and, as such, strengthen the global nonproliferation regime.

*Securing domestic legal reform:* The President promised in the Joint Statement that the administration would seek agreement from Congress to adjust U.S. laws and policies. We recognize that the pace and scope of civil nuclear cooperation requires close consultations between the executive and legislative branches. In our own ongoing review, we have identified a number of options for modifying and/or waiving provisions of the Atomic Energy Act that currently prohibit the United States from engaging in such cooperation with India.

As Under Secretary Burns noted, we do not intend to ask Congress to take legislative action until the Indian Government takes certain important steps. We welcome your partnership as we embark on this effort, and look forward to working with your committee, together with your House counterparts, as we jointly consider the best way forward in the legislative area.

#### BOTTOM LINE: ADVANCING NONPROLIFERATION

We must recognize that there is today no viable cookie-cutter approach to nonproliferation; we need tailored approaches that solve real-world problems. We need to be creative and adjust our approaches to take into account the conditions that exist, so that we can achieve our nonproliferation objectives. This has been a premise of administration policy since the outset of President Bush’s first term, in which he established non- and counterproliferation as top national security priorities. He put in place the first comprehensive strategy at the national level for combating this preeminent threat to our security, and he embarked on changing how we as a nation, and how the international community more broadly, design and expand our collective efforts to defeat this complex and dangerous challenge.

Indeed, recognizing that traditional nonproliferation measures were essential but no longer sufficient, the President has established new concepts and new capabilities for countering WMD proliferation by hostile states and terrorists.

- He sought increased national resources to prevent proliferation through Nunn-Lugar type nonproliferation assistance programs and, through the G-8 Global Partnership, successfully enlarged the contributions from other countries to this essential task.

- He launched the Proliferation Security Initiative to disrupt the trade in proliferation-related materials. This initiative has achieved the support of more than 70 other countries who are working together to share information and develop operational capabilities to interdict shipments at sea, in the air, and on land.
- He initiated the effort resulting in the unanimous adoption of U.N. Security Council Resolution 1540, which requires all states to enact both legislation criminalizing proliferation activities under their jurisdiction and effective export controls to help protect the sensitive materials and technologies on their territories.

These efforts in effective multilateralism, coupled with the strengthening of our own counterproliferation capabilities, have produced concrete successes such as the unraveling of the A.Q. Khan network and the decision by Libya to abandon its nuclear, chemical, and long-range missile programs.

Similarly, we must pursue approaches with respect to India that recognize the reality that it is a growing 21st century power, shares our democratic values, has substantial and growing energy needs, and has long possessed nuclear weapons outside the NPT. Status quo approaches have not acknowledged these pragmatic considerations, nor have they achieved the positive outcome of progressively integrating India into the international nuclear nonproliferation mainstream.

We have begun consultations with our international partners; have conducted a number of introductory discussions with you, your colleagues, and your staff; and look forward to working further with you on the steps necessary to realize the benefits of the July Joint Statement.

Thank you.

The CHAIRMAN. Well, thank you very much, Secretary Joseph.

Let me just suggest, for our first round of questioning, maybe 8 minutes. We have four distinguished witnesses on the second panel, and we'll want to question them. If there are compelling questions, we'll go beyond that time, as always.

Let me start the questioning by noting, Secretary Joseph, that you've pointed out that we should not make the perfect the enemy of the good by piling on additional amendments and qualifications. And that may be sound advice. Yet, as I listened to your testimony, as well as what has been occurring in the world even since the meeting at the summit, I have noted that significant sanctioning of two Indian scientists occurred on September 23, 2004. Let me just ask, for a second: Is that correct?

Mr. JOSEPH. I believe it was the previous year, sir.

The CHAIRMAN. What was the reaction of the Government of India to those sanctions at that time? In other words, as these activities occur, whether they are Indian scientists or whether they are votes in the IAEA or the United Nations, these are events that occur in the world, outside of our relationship, which is tested. I'm eager for your feeling of this.

I add, just anecdotally, reports that there are pressures on the Prime Minister from opposition party members in India, who feel that he has been too concessionary and that India's negotiations with the United States are going too far. It's not really clear how things are shaping up in their Parliament as this proceeds. You have suggested that until significant progress is made in meeting the requirements of the summit, you would not submit legislation to us. Yet, at the same time, we all acknowledge that amendments to our laws have to occur in order for this to be perfected.

Now, there are so many moving parts of this, I'm finding it awfully hard to respond to questioners who have the sort of broad question, "What do you think of all of this?" You know, I think our overall thought is that it's a great idea, that India and the United

States should be much closer. Furthermore, this is only a part, as you pointed out, of a large agreement that concerns defense and trade and various other items that are helpful. But, at the same time, the nonproliferation part is extremely important, for obvious reasons, including our negotiations in Iran now, the Six-Party Talks in North Korea, and general activity in the nonproliferation area.

So, what are your guidelines for this? Is the idea, perhaps, that we just, sort of, stay in touch? In other words, you have certainly offered a lot of consultation, but I'm not certain that I perceive the action steps that you're looking for.

Mr. JOSEPH. Well, Senator, you're quite right about the political dynamics in Delhi. I know they're both complex and crosscutting. And Under Secretary Burns can probably do a better job addressing that than I can.

There are many moving parts—in Delhi, here in Washington, in our bilateral context, but also in the context of the Nuclear Suppliers Group and in other international fora that deal with nonproliferation. And we are trying to bring these activities together in such a way that we will move forward with the commitments that the President has made in the July statement, following the delivery of certain actions by India, including the presentation of a plan for the separation of military and civilian facilities that is both credible and defensible, from a nonproliferation perspective. And they're—

The CHAIRMAN. And that's a very—

Mr. JOSEPH [continuing]. Beginning—

The CHAIRMAN [continuing]. Critical thing right there, isn't it? And how are they coming along on that?

Mr. JOSEPH. Well, again, Nick was just in New Delhi and addressed that issue in the context of the bilateral Working Group, so I will let him address that. In terms of North Korea and Iran, if you would like, I can take that on now, or we—

The CHAIRMAN. Yes.

Mr. JOSEPH [continuing]. Can return to that.

The CHAIRMAN. Go ahead.

Mr. JOSEPH. It is my sense that the interactions that we've had with India since July have had a very positive effect on our efforts with regard to Iran, and both Nick and I have pointed out the positive move that India took at the IAEA board meeting in September to support the resolution of noncompliance. I think that's very significant, and I think it is attributable to the fact that the July statement, and the agreement that is embodied in that statement, is a very positive step for India. I think that they will benefit significantly from this arrangement. And they know it. But they also know that they have to become much better partners in nonproliferation. And, again, I think their action on Iran is indicative of the fact that they're moving in that direction, even though that wasn't formally part of the July agreement.

In terms of North Korea, I don't think that the July arrangement, or the changes that are envisioned in that arrangement, will have any impact on North Korea. North Korea, of course, is different from India, in the sense that North Korea has violated the NPT. North Korea doesn't have a peaceful nuclear energy program.

In fact, my understanding is that all aspects of its nuclear program are weapons related. We have, in the context of the Six-Party Talks that followed the July announcement, the round in September, achieved the commitment from North Korea to undertake complete denuclearization, to abandon all of its nuclear programs. And I think that is significant. It's still a long way before we achieve that commitment, but I think it's important that we've made that first step.

The CHAIRMAN. Secretary, just following up, a moment, on the vote of the Security Council, I think we all agree that was very significant. But, as I understand, the Indians stated they voted that way because the resolution did not report Iran to the Security Council. Now, it's been, generally, the policy of our administration to report Iran to the Security Council. What happens when the day comes and that vote comes up? This is coupled with rumors that India is forging strategic relationships with Iran because of oil needs, energy needs. It's no secret that Indians, people from China, and people from the United States are all over the Middle East, all over Africa, pinning down the last acre now. What sort of feel do you have for continuing fealty to the prospect of the two of us staying together?

Mr. JOSEPH. Senator, I think that goes to your observation about the complexity of the political dynamics in India. And there are many crosscutting pressures, as there are elsewhere.

In terms of the vote that was taken in Vienna in September at the Board of Governors meeting, it is our view that that vote requires a report to the Security Council. The issue is: When will that report be made, and what will be the nature of that report? And I think those questions will only be answered in the context of Iran's activities.

The CHAIRMAN. Thank you.

Senator—

Mr. BURNS. Mr. Chairman, if I—

The CHAIRMAN. Yes, go ahead.

Mr. BURNS [continuing]. If I could, with your permission, I just wanted to add to what Under Secretary Joseph said. The Indian Government has made it clear to us they do not wish Iran to become a nuclear weapons power. They do not wish Iran to have the capability to enrich or reprocess. And the Indian Government joined us—after a lot of discussion and thought in Delhi—they joined us in this vote on September 23. And so, we think that they've given a fairly clear answer as to—

The CHAIRMAN. That's a very—

Mr. BURNS [continuing]. As to where they stand.

The CHAIRMAN [continuing]. Declaration.

Mr. BURNS. If I could also say—you asked a question about sequencing—and, very briefly, after July 18 the big dilemma we had with the Indians was: How do we implement this agreement, because there are corresponding actions on both sides? And we said that we would introduce the idea into the Nuclear Suppliers Group, that we would help to make India a part of both ITER and Generation IV, but that they had an obligation, too, a series of them, and the most critical was the separation of the civil and military nuclear programs. They are simply not in a position yet to give us a

plan. And until they do, we think it's best to hold off asking Congress to act. I've told the Indians that once they have a plan that's credible and that's transparent, we would want to share that plan with the Congress, with Members and staffs, so that you could look at it before we ask you to take action. They understand that, and they know that's going to be part of this arrangement.

The CHAIRMAN. Thank you.

Senator Biden.

Senator BIDEN. Thank you, Mr. Chairman.

Fellows, this is a gamble, under any circumstance. To try to square the circle to say that the action being proposed with regard to India is somehow not fundamentally inconsistent with the NPT is, I think, impossible to do. But there is the art of the practical, and the strategic benefits that could flow from this relationship might trump the problem of having to argue that somehow this fits our nonproliferation policy.

One of the great benefits of having men of your caliber here, and the witness list that's to follow, is that, although this forum doesn't lend itself to it, what I would like to do is sit you all in the room at one time and have an open discussion among all of you, because I have such regard for each of you, in terms of your background, intellect, and experience.

This is a way of apologizing ahead of time to Ash Carter. I want to ask you a question from the end of his testimony, because you're not going to be here, in all probability, to hear his testimony, although I'm sure you will read his statement. And I think he puts it, as he always does, extremely well. He goes through, in the first five pages of his testimony, laying out and acknowledging all the potential benefits that could flow from this new and emerging relationship, and he says, "The list above is a very substantial, even breathtaking, set of potential benefits to the United States of a strategic partnership with India." Then he asks what I think is a \$64 question, "How realistic is it?"

So, it's one thing to take an action which I think is totally inconsistent with what we've had in place as a rationale to keep other countries from going nuclear, the NPT, but it may be worth the risk if the benefits are realistic. And, again, asking for anticipatory absolution here, going on to read, in one of the concluding paragraphs, Ash says, "Most of the items on the list are also hypothetical and lie in the future that neither side can predict. This is certainly the case with regard to China counterweight and Pakistan contingency items. Other items on the list, like Iran's nuclear program, will unfold sooner."

Then, going to the end, he says, "India, as befits a great nation on its way to global leadership, will have its own opinions about this list. Some American proponents of the India deal—have compared it to Nixon's opening to China, a bold move based on a firm foundation of mutual interest, but more a leap of trust than a shrewd bargain. Mao and Nixon, however, had a clear and present common enemy, the Soviet Union, not a hypothetical set of possible future opponents. But the real difference between the Nixon-Kissinger deal and the Indian deal is that India, unlike Mao's China, is a democracy. No government in Delhi can turn decades of Indian policy on a dime, or commit to a broad set of actions in support of

United States interests. Only a profound and probably slow change in the views of India's elites can do this. India's bureaucracies and diplomats are fabled for their stubborn adherence to the independent position regarding the world order, economic development, and nuclear security."

I have a lot of questions my staff prepared, but nothing, it seems to me, says it as succinctly and lays out the choice as starkly as what I've just read.

So, how confident are you regarding the benefits of this bargain between two unorderly democracies like ours and theirs? Some have suggested, as did the author of the paper I just read from, that the India deal just may be premature. What you guys are saying is, you're not coming to us yet, until you see what happens in the first step. Are they going to make these kinds of front-end changes? And that's going to be an indication of what's likely to come.

This is not, as I said, a slam-dunk. This is a difficult decision. You've bet on the future here. What are some of the broader indicators that make you think that that bet is a sound bet? That's my question.

Mr. BURNS. Senator, thank you. I had a similar experience. I was riding over here. I took a sneak preview at Ash's testimony—my friend Ash's testimony—and I, too, noticed the back part of it and was intrigued by how he formulated the—one of the strategic benefits.

I'll take a stab at answering your question in the following manner. We're very different countries. And there's no question, if you look back all the way to 1947, when President Truman and Prime Minister Nehru began to think about our United States-India relationship. It's never—this relationship has never achieved its promise. I think we have to give credit to President Clinton for having made the first strategic step a decade ago to try to reach out to India and to define a strategic relationship. President Bush, I would say, has doubled that effort.

And here is how we view the relationship. It is going to take some time before we develop the kind of strategic partnership with India that we have, say, with Australia or the United Kingdom or France or Germany or different countries. But India increasingly sees its role in the world as a global country. And we find that on the issues that are important to us, the transnational problems—whether it's global climate change or trafficking in women and children, or terrorism, or WMD, international crime, democracy promotion—we tend to think alike with the Indians, and we tend to adopt the same strategies and positions on those transnational problems. On the—that's the first.

Second, both of us are Asia-Pacific powers. Both of us have a stake in the stability of Asia in the next 25 or 50 years. Both of us are democratic. Both want to see democratic countries protected. And we want to see a regional architecture in APEC, in the ASEAN Regional Forum, develop that would solidify security and peace in Asia. India is part of the strategic balance in Asia.

Third, I think one of the great changes I've seen since I've come back to Washington is the new emphasis on South Asia—the American national interest in stability in Afghanistan; a stable, produc-

tive relationship with Pakistan; to see Pakistan and India reduce their problems; and to see, in Nepal, Burma, and Bangladesh, hopefully, the growth of democracy. India is fundamental to all of those issues that are central to the United States. And I've spoken of democracy promotion, and both of us have spoken about India's principal position on Iran. And India is in a position to have some influence on Iran, to dissuade it from seeking a nuclear path.

So, for all those reasons, we think there are the beginnings of a strategic partnership. I don't want to oversell this and equate it to what we've got with our NATO allies. But I would say this, as a career diplomat, there is the possibility that, in 5 to 10 or 15 years, we might count India among the four or five most important countries to the United States in the world, if we can develop this partnership. The civil nuclear initiative is a big part of this, both psychologically, in separating ourselves from the past 50 years, and also in terms of responding to both of our interests in nonproliferation.

Senator BIDEN. Thank you, Mr. Secretary.

The CHAIRMAN. Thank you, Senator Biden.

Senator Hagel.

Senator HAGEL. Mr. Chairman, thank you. Gentlemen, welcome.

Secretary Burns, you've just mentioned Pakistan, and I'd be interested in you developing that a little more as to what consequences there might be regarding the Pakistani nuclear weapons program if this deal is consummated, as well as how might this affect the Pakistani-Indian relationship?

Mr. BURNS. Thank you, Senator.

Well, Senator, as you know, we have a critically important relationship with Pakistan on counterterrorism, and we find Pakistan to be a good partner to the United States. But we are not contemplating offering the same type of civil nuclear energy cooperation to Pakistan as we are now hoping to offer to India, with congressional consent, for a variety of reasons. And I'd be happy to go into those.

Second, it's our view that, as Secretary Rice has pointed out, we need to dehyphenate—it's not a very elegant phrase—dehyphenate our policy in South Asia. For a long, long time, successive American administrations have looked at South Asia as a zero-sum region, where we try to balance everything we do with Pakistan and what we do with India. And we, frankly, think it's time to separate the two and to develop a full-bore successful relationship with Pakistan, based, of course, on the critical imperative of effective counterterrorism, but also to develop with India this wide strategic framework of joint initiatives that we have described this afternoon. And we think that we can have a good relationship with both countries. And this civil nuclear energy deal should not have a negative impact on our relations with Pakistan.

Finally, I would say, in answer to your question, the United States does not see itself as a mediator between Pakistan and India. Kashmir is a fairly complex problem. There has been an attempt by Prime Minister Singh and President Musharraf over the last year or so to meet more often. You can see, in the wake of the earthquake, they decided to open the line of control in many different places on November 7. The Indians have extended earth-

quake assistance to Pakistan. This is very slow, a very slow rapprochement, and there are a considerable number of problems ahead, but they're off to a good start. And if we can help that process, we will. And we're trying to do that, behind the scenes. But the civil nuclear energy deal should not upset that process, of India-Pakistan relations, and certainly should not have a negative effect on the United States-Pakistan relationship, in our judgment.

Senator HAGEL. Have we consulted with the Pakistani Government on this?

Mr. BURNS. We have—yes, we have described—after July 18, we sat with the Pakistani Government, described the outlines of what we're trying to do with the Indians in all the fields that I enumerated, not just the civil nuclear field. And I know that Secretary Rice had a chance to talk to President Musharraf about it in September when they were together at the United Nations. And I wouldn't be a good diplomat if I described the Pakistani reaction, but, except to say, very businesslike. They're focused on the United States-Pakistan relationship. They're not trying to judge us, at least in our conversations, with what we're doing with the Indians.

Senator HAGEL. So, they do not object to this.

Mr. BURNS. Well, I don't want to speak for them. I can't say—I can't say that there haven't been Pakistani officials who have—not President Musharraf, but others—who have, maybe, been unhappy about this. I know that Pakistani officials have said, from time to time since July 18, "We'd like to have the same kind of nuclear arrangement with the United States that India has." And I think you've heard today, and in previous statements, we've said that this is a unique arrangement; unique to India.

Senator HAGEL. What about the 44 members of the Nuclear Suppliers Group? We've consulted with them. What reactions have we received?

Mr. JOSEPH. We did begin the consultations with the members of the Nuclear Suppliers Group last month.

Senator BIDEN. You must have said something wrong. [Laughter.]

Thank you all very much.

Senator HAGEL. Well, this is a—

[Laughter.]

Senator HAGEL [continuing]. This will give you more of an opportunity—

Mr. JOSEPH. Yeah.

Senator HAGEL [continuing]. To think clearly. [Laughter.]

Please continue, Secretary Joseph.

Mr. JOSEPH. The reactions were mixed, as I mentioned in my introductory comments. Some states did express significant reservations about moving forward, in the sense that they believe that there will be severe risks to the NPT regime. I mentioned two: Sweden and Switzerland. Other states were very supportive. The United Kingdom was supportive, France was supportive. Both of those governments have made very positive comments about the need to move forward with India in this context.

I think the majority of those who spoke raised questions, but did not express support or opposition; rather, they made very clear that they were taking a wait-and-see approach to this. And one of the

main factors that will affect their judgment, their assessment, is the question of the separation of civilian and military facilities and the application of IAEA safeguards on the civilian side, as well as how India deals with the commitment that it has made with regard to adherence to an Additional Protocol.

So, like us, those countries are in a waiting posture to see what the Indian plan is, and, perhaps like us, they will wait until they begin to see the implementation of that plan.

Senator HAGEL. What was the reaction of other countries with major civil nuclear programs—Brazil, Japan, Germany?

Mr. JOSEPH. Again, of the countries that you mentioned, it has been mixed. Japan, in the context of my discussion in the G-8, raised a number of significant questions and concerns about moving forward, but, at the same time, did not express support or opposition. I think they, like most of the others, are waiting to see what develops out from this.

Other countries with large civilian nuclear infrastructures, of course, I've mentioned France and Russia has been very positive with regard to moving forward with India in the context of the July agreed framework. Also, Russia has been very clear to emphasize that they believe that, in the Nuclear Suppliers Group context, as well as in others, we should treat India as a unique case that provides the best protection for moving forward without damage to the NPT regime.

Senator HAGEL. May I follow up on a question that Senator Biden had asked at the beginning in his opening comments? That is regarding the precedent that we would set with other countries that could be picked up, countries like Russia or China, in relationship to Iran, that they would use such a precedent to make their own side deals with Iran, something obviously we've thought through. And how do we respond to that?

Mr. BURNS. I would just—maybe both of us could take a stab at this, Senator.

Senator HAGEL. Sure.

Mr. BURNS. I know, from—we can't speak for the Russian Government, obviously—but I know from our discussions with the Russian Government pertaining to Iran, the Russians don't want to see Iran enrich and reprocess, and have stated publicly they do not wish Iran to acquire nuclear weapons. So, I wouldn't think that Russia would be in a position to make the argument that somehow what the United States is doing with India on the civil nuclear side would give Russia a license to somehow be softer on the big issue that we face with Iran—that is, denying it a nuclear weapons capability.

Senator HAGEL. North Korea, I would include in that, by the way, as well. So—go ahead, I'm sorry.

Secretary Joseph.

Mr. JOSEPH. With regard to Russian provision of technology to Iran, of course they're already building the Bushehr power reactor in Iran and they're very interested in building additional power reactors in Iran. We believe that we have, working with the Russians and with others, made the case that the sensitive technologies, particularly enrichment and reprocessing, should not be provided to

Iran. Iran should resuspend its conversion activities and not move forward with enrichment.

But going to your fundamental question, Senator, I think that there is a risk. There is a risk that, as we move forward with this type of arrangement with India, other countries could, very cynically, use it as an excuse to provide technologies that would present a proliferation risk. We need to deal with those on a case-by-case basis. We need, I think, to prevail in our argument that India is a unique case. We are there with Russia, but we need to make that argument with others, and I think we can sustain that argument, because India does have unique energy requirements. India has a nuclear nonproliferation record that is quite solid. And the other countries that I think would be on the list that you or I or others would develop as particularly risky do not have that same nonproliferation record.

Senator HAGEL. Thank you.

Mr. Chairman, thank you.

The CHAIRMAN. Thank you very much, Senator Hagel.

Senator Chafee.

Senator CHAFEE. Thank you, Mr. Chairman. Welcome, gentlemen.

How much domestic energy does India have now, either through coal, gas, oil, hydro?

Mr. BURNS. Senator, India is a country with enormous energy needs. It cannot produce all the energy it needs. And, as you know, it's got a rapidly expanding population. Before you came in, I think, I mentioned, at the start of my testimony, it will soon overtake China as the world's most populous nation. And one of the major—

Senator CHAFEE. They don't have any domestic energy sources to speak of, anything significant?

Mr. BURNS. No, and that's one of the major issues in Indian foreign policy. They do have some domestic sources of energy, of course, but they need to look outside their country for a lot of their future energy needs. And that's—they're focused on developing their civil nuclear sector—in part, for that reason.

Mr. JOSEPH. Senator, I think they do have a significant amount of hydro energy. They also have, of course, a lot of coal. But the coal is not environmentally friendly, in the sense that it's the dirtier type of coal. That is one reason, quite frankly, that we believe nuclear energy is an attractive option for India.

Senator CHAFEE. And, presently, they have 14 reactors that generate 2,500 megawatts of power, and, if this agreement goes through, anticipate increasing that tenfold, to 20,000 megawatts over 10 to 15 years. So, for the sake of argument, if the agreement does not occur, where would that gap be made up, your best guess, I guess would be my question?

Mr. BURNS. Our best guess is that India would have to go in search of foreign oil and gas contracts. That would be one of their first initiatives. As you know, they've—there have been some discussions between Iran and India about a future gas and oil contract. They have not yet made an agreement. Our—it is our hope that they will not make an agreement with Iran. Of course, it's up to India to decide this, but that would be our hope. And part of the

rationale here, for this particular initiative by the United States, is to help India cope with its future energy needs.

Senator CHAFEE. And, again, for the sake of argument, if they were to contract with Iran, how would they get that supply? Pipelines or shipping?

Mr. BURNS. I'm not an expert on the Iran—a prospective—or a hypothetical, I should say, Iran-India oil and gas deal, but I believe that they've talked about the development of a pipeline system. A lot of people think that would be prohibitively expensive.

Senator CHAFEE. It would have to cross Afghanistan and Pakistan, obviously, or—now, Secretary Burns, you said you were in New Delhi 2 weeks ago, and the—from my information here, the Prime Minister received some domestic criticism from political parties on the left and right for voting with the United States on the Iran nuclear issue, the IAEA, on September 24, and both the right-wing BJP and the leftist party, from the ruling Congress, rely on to maintain power accused the Prime Minister of buckling under to United States pressure. What's the—having just come back from there, what is the sentiment toward the United States there—on the street, if you will?

Mr. BURNS. Thank you very much. Well, the Prime Minister heads a very large coalition of—that contains a variety of different political parties inside the coalition. And some of those coalition partners have been critical of the Government for the July 18 agreement, as well as for the civil nuclear energy deal, which is one of its principal components. The Government, in Delhi, has defended the agreement, saying that it's in India's best national interest.

In general, the United States is well thought of in India. If you look at the public opinion polls in India, itself, the United States consistently has high ratings, in terms of being perceived as a friend to India. This is a great change from general Indian—and, indeed, American attitudes toward India—of the past, of the cold-war period. It's positive, it's very hopeful, but it's not universally shared. There is a Communist Party of India that doesn't think much of the United States. We traditionally have had very good relations with the dominant parties, both the Congress Party, which is the major party in the current coalition, as well as BJP, the leading opposition party, formerly the government party—the governing party. And we've made a great effort to try to expand our relationship with India to build on the broad measure of public support that the Indian Government—the Indian population gives to relations with us.

Senator CHAFEE. How do you analyze, then, the Prime Minister's own political party criticizing him for this deal? What was their—what was their point? What—why criticize it?

Mr. BURNS. Senator, I'm not an expert in every facet of what's been said and what kind of barbs have been exchanged in Indian politics over the deal, but I do know that the Congress Party supports the deal, the Prime—the majority party, but that there are some other members of the coalition that do not. I thought that, based on my conversations in New Delhi 2 weeks ago, that this agreement, on balance, has strong support in India. The civil nuclear agreement, as well as the opening to the United States, that

it's being hotly debated, because, for decades, India was the personification of a nonaligned country. We were perceived differently by the Indian public, and by politicians. And that is what's changing. And we see a confluence of interests between our two countries, and we see now the opportunity to have the kind of strategic political relationship that was just not possible 20 or 30 or 40 years ago between our countries. So, it will be controversial in some parts of India. It's controversial in some parts of the United States. But we think it's—on balance, this is a good deal for the United States to pursue this civil nuclear energy agreement.

Senator CHAFEE. Would there be politicians in New Delhi that would argue they draw—they get the energy from Iran?

Mr. BURNS. I met with two groups of Parliamentarians when I was in Delhi. Large groups. And I—Secretary Rice and I met with another group of Parliamentarians last week, a visiting group from India. And they represented, in all three of these engagements, all the different political parties—I think, with the exception of the Communist Party—in the Indian spectrum. And, for the most part, what I heard—and, I know, as Secretary Rice heard last week—was strong support from these Indian—various Indian political parties for a strategic engagement with the United States, for a closer relationship, and for civil nuclear energy cooperation. So, it's not universal, but it's fairly broad—broad-based.

Senator CHAFEE. It seems to me that if you are going to criticize the deal, the only option is, as you said earlier, that's where the energy would have to come from.

Mr. BURNS. Yeah.

Senator CHAFEE. Following up on Senator Hagel's questioning about: You're not going to—and you said this in your prepared statement—"we do not plan to offer such cooperation to any other country," who might feel aggrieved in this around the world? Why—what other country might take exception to this favoritism?

Mr. JOSEPH. The most likely candidate on that list, of course, would be Pakistan. It's only India, Pakistan, and Israel that have not signed the NPT. Israel has not expressed any desire to have this same sort of cooperation. And that is, I think, directly attributable to the fact that Israel doesn't have the same sort of energy requirements that India does.

Senator CHAFEE. Great. Thank you.

The CHAIRMAN. Thank you very much, Senator Chafee.

Let me ask just one final question on my part. How will this civil nuclear agreement impact India-Pakistan nuclear confidence-building? For example, how might increased transparency on the Indian civilian nuclear facilities impact on Pakistani policies regarding its nuclear arsenal?

Mr. BURNS. Senator, we believe that the increased transparency, the opening up of India's civil nuclear program for the first time in 30 years, to international inspection and supervision and oversight is going to give confidence to the Pakistani Government. And should. And so, while it's not the major factor in the relationship between Pakistan and India, it is a—it is an important one. And we hope that it will contribute to what we would like to see, and that is a gradual improvement of relations between the two countries, both of them friends of the United States.

The CHAIRMAN. Thank you.

Senator Hagel, Senator Chafee, do you have additional questions?

We thank both of you for very comprehensive testimony, and very thoughtful arguments. We look forward to many more visits with you, and we appreciate your coming today.

Mr. JOSEPH. Thank you.

Mr. BURNS. Thank you very much.

The CHAIRMAN. I would like to call now on our second panel of witnesses. As I mentioned earlier, they are the Honorable Ronald Lehman, the Honorable Ashton Carter, Mr. Henry Sokolski, and Mr. Michael Krepon.

[Pause.]

The CHAIRMAN. Gentlemen, we welcome all of you. As was indicated earlier, your statements will all be made a part of the record, so you need not ask for that to happen. And we will ask you to proceed in summaries, if you can, so that we will have ample time to hear the four statements, and proceed to our questioning.

I will ask you to testify in the order that I introduced you, which, first of all, would be Ronald Lehman, Ashton Carter, Henry Sokolski, and then Michael Krepon.

Very good to have you, again, Ron, before the committee. We would like for you to proceed with your testimony.

**STATEMENT OF HON. RONALD F. LEHMAN II, DIRECTOR, CENTER FOR GLOBAL SECURITY RESEARCH, LAWRENCE LIVERMORE NATIONAL LABORATORY, LIVERMORE, CA**

Ambassador LEHMAN. Thank you very much, Mr. Chairman.

Since I wear a number of hats, including my association with you, let me remind everyone I'm speaking only for myself, for whatever that's worth. And a lot of what I would have said has already been said. And a lot of what I want to say is about to be said. And it's late. So, let me try to go right to something of a net assessment that gives the thrust of my views.

The Joint Statement is an historic milestone for nonproliferation that creates both great opportunities and great risk. It creates an opportunity to strengthen a nuclear nonproliferation regime that is suffering from its own internal weaknesses. These weaknesses include inadequate enforcement, the threat of breakout, and an inability to engage effectively nonparties to the Nuclear Non-Proliferation Treaty, which is a subset of the more general problem of reconciling the application of universal rules to what are often very different particular circumstances. Because the terms of the Joint Statement, however, also spotlight those weaknesses, mishandling of its implementation could have adverse consequences for the nonproliferation regime.

Whether one could have negotiated a somewhat better deal is, I think, moot. The Joint Statement is in play, and we all have an obligation to ensure that our national security is enhanced as a result of the dynamic process now underway. Bringing India into a more comprehensive regime of nonproliferation and restraint could enhance our ability to reduce the dangers associated with weapons of mass destruction. India could do much to help within its borders,

in South Asia, in other troubled regions, and globally. Congress can help ensure that this is a sufficiently ambitious agenda.

If the basic approach contained in the Joint Statement collapses, however, we will not return to the status quo ante, United States-Indian cooperation will be set back, and the weaknesses in the existing regime would be exposed to even greater pressure. I would urge the Congress to focus on the dynamics of the process and the goals to be achieved as a result of the United States-India Joint Statement.

Much that one might have detailed in the original package may be more successfully achieved by driving subsequent interactions in the right direction. This can only be done, I believe, if nonproliferation is a centerpiece of strategic engagement, rather than a trade-off. It is best achieved by retaining a viable nuclear nonproliferation treaty at the core of a broader nonproliferation regime that uses more targeted embedded engagement to address the fundamental causes and conditions of proliferation. In short, widely shared goals should guide our actions, but implementation will fail if a one-size-fits-all mentality is applied rigidly to different circumstances.

Relations between the United States and India have long been far worse than the objective conditions warrant. The reasons are too numerous to list. Much has changed, however. Strong bipartisan support exists for engaging the emerging India. I believe it is the right approach. But we should not let our euphoria about the potential relationship cause us to undermine our most effective nonproliferation tools. We should not assume that great economic and strategic gains would result simply from civilian nuclear cooperation. Rather, we should fold our flexibility on civil nuclear cooperation into our efforts to work with India to strengthen the overall regime to counter weapons of mass destruction.

Many United States and Indian concerns are addressed in the Joint Statement, but it's premature to suggest that they will be addressed successfully. What is underway is a phased process. Neither side will be certain of how much will be achieved for some time.

Over the years, for example, various Indian interlocutors have floated the idea of separating civilian from nuclear facilities and applying safeguards to them. We have never known the scale of the separation or the quality of the safeguards, or I might add, the seriousness of the Indian commitment to this. If India is serious about nuclear power, then its infrastructure should be declared predominantly civilian, with permanent IAEA safeguards. A token step would be counterproductive.

India has long had a formal position in favor of a fissile material cutoff. The Joint Statement reiterates that support, and goes further in trying to align India's responsibilities and benefits with those of other responsible states with advanced nuclear technology. The definition of "responsible states with advanced nuclear technology" is not clear, but examples might be those that are associated with the ITER fusion program and the Gen-IV advanced nuclear reactor programs. Nearly all already have de facto or de jure fissile material cutoffs, and the rest are committed to such cutoff.

Because the prospects for a Fissile Material Cutoff Treaty seem so poor in the Conference on Disarmament, perhaps an interim multilateral approach could be put forth with such states with advanced nuclear technology, and other relevant states—in part, to enhance nuclear security; in part, as a fly-before-buy experiment that might lead ultimately to progress on an FMCT in the CD. If India were to join the rest of the advanced nuclear community in this regard, it would be a major contribution.

Perhaps the greatest contribution that India could make nonproliferation outside its borders would be to end its guerrilla war against the Non-Proliferation Treaty and support the international community in its efforts to encourage and, as necessary, enforce compliance with obligations. The problem is that India has strategic and economic objectives in addition to whatever nonproliferation goals it may share with the United States. Whether it is non-aligned politics or its strategic engagement of Iran, these can create serious problems.

India cannot be expected to alter its most fundamental interests, but, in these areas, we may find a measure of New Delhi's actual commitment to real nonproliferation and global partnership.

Within its own borders, the growing concern over nonstate and quasi-state actors places a premium on modern physical security, export controls, counterterrorism, implementation of U.N. Security Council Resolution 1540, and support for measures such as the Proliferation Security Initiative. These are areas in which the United States and India can work together and gauge each other's commitment by our synergy and transparency.

Mr. Chairman, in summary, the Joint Statement creates opportunities to strengthen nonproliferation by engaging India and reducing some of the stresses on the Nuclear Non-Proliferation Treaty. A failure by India to step up to its side of the bargain fully, and to continue to move in the direction of cooperation and restraint, however, could create dangers for an NPT-centric regime that is having difficulty because of noncompliance, weak enforcement, the spread of WMD capability into troubled regions, and the rise of dangerous nonstate or quasi-state actors.

Ultimately, states will remain committed to nonproliferation, and members of the Non-Proliferation Treaty will remain within the regime, only if it serves their interest. Many support the NPT because they get civilian nuclear cooperation, but most support the NPT because it enhances their security. So long as the NPT serves their interests, the emergence of asymmetrical arrangements to deal with different circumstances is not only manageable, it is absolutely necessary.

Thank you, Mr. Chairman.

[The prepared statement of Ambassador Lehman follows:]

PREPARED STATEMENT OF HON. RONALD F. LEHMAN II, DIRECTOR, CENTER FOR GLOBAL SECURITY RESEARCH, LAWRENCE LIVERMORE NATIONAL LABORATORY, LIVERMORE, CA

Mr. Chairman, members of the committee, I am pleased to accept your invitation to join with this distinguished committee—and with my good friends on this panel—to discuss the nonproliferation implications of the United States-India civilian nuclear cooperation called for in the July 18, 2005, Joint Statement of President George W. Bush and Prime Minister Manmohan Singh. Over the years, I have ap-

peared before this committee in various capacities, and, Mr. Chairman, I am pleased to cochair with Ash Carter your Policy Advisory Group on the future of the nonproliferation regime. Nevertheless, I would like to make clear that today I am speaking only for myself and the views I express here do not necessarily represent those of any administration, organization, or group with which I am or have been associated.

The committee is well aware of the content of the United States-India Joint Statement: In the context of the broader global partnership on the economy, energy and the environment, democracy and development, and high-technology and space reflected in the Joint Statement, India will receive the benefits of civil nuclear cooperation in exchange for enhanced nonproliferation commitments. More specifically, India has agreed to separate civilian and military nuclear facilities, place those civilian facilities under IAEA safeguards, and implement an IAEA Additional Protocol. India will continue its moratorium on nuclear weapons testing and work toward a multilateral Fissile Material Cutoff Treaty. India will help prevent the spread of enrichment and reprocessing technologies to states that do not have them and adhere to the Nuclear Suppliers Group (NSG) and Missile Technology Control Regime (MTCR) while legislating strong export controls.

For its part, the United States Government will propose that Congress adjust United States law and that relevant international bodies adjust their regimes to permit full civilian nuclear energy cooperation with India. The United States will also consult with its partners on the inclusion of India in certain advanced nuclear energy research associated with both fission and fusion energy.

Before I address the three specific questions the committee has asked about the Joint Statement, let me offer a short net assessment. The Joint Statement is an historic milestone for nonproliferation that creates both great opportunity and great risk. It creates an opportunity to strengthen a nuclear nonproliferation regime that is suffering from its own internal weaknesses such as inadequate enforcement, the threat of breakout once an advanced nuclear capability has been achieved, and an inability to engage effectively the nonparties to the NPT. Because the terms of the Joint Statement, however, also spotlight those weaknesses, mishandling of the implementation of its terms can have adverse consequences even when the best of intentions are involved. The elements of the package are not new, but the suddenness with which the particular mix of elements was put together has caught many key players at home and abroad by surprise. They need to take the time to think through their positions carefully as the governments of India and the United States flesh out their phased approach. The executive branch needs also to consult closely with the Congress, and within the executive branch, regional and functional experts need close, regular, and detailed coordination. All of this will serve to improve our ability to work with India and other governments to enhance our efforts against all weapons of mass destruction.

Whether one could have negotiated a somewhat better deal is moot. The Joint Statement is in play, and we all have an obligation to ensure that our national security is enhanced as a result of the dynamic process now underway, especially our ability to prevent and counter the spread of weapons of mass destruction. If the basic approach contained in the Joint Statement collapses, we will not return to the status quo ante. United States-Indian cooperation will be set back, but also the weaknesses in the existing regime will be exposed to even greater pressure. Bringing India into a more comprehensive regime of nonproliferation and restraint, however, could significantly enhance our ability to reduce the dangers associated with weapons of mass destruction. Congress can help insure that this is a sufficiently ambitious agenda. India could do much to help within its borders, in South Asia, in other troubled regions, and globally.

Yet India remains a symbol of a glaring challenge to the nonproliferation regime; namely reconciling universal principles with very different circumstances. Is the same verification system appropriate for both Sweden and Iran? Is a democratic India outside the NPT really to be considered more of a nuclear pariah than a despotic North Korea inside the Treaty? Measures to deal with specific concerns are often inappropriate to apply universally. Yet rules that can be applied universally are often too general to address specific concerns, sometimes creating an inability to enforce compliance or even encourage restraint. In many ways, progress in the NPT centered nonproliferation regime has been measured by the success or failure in tailoring measures to different circumstances. One sees this in the dealings North Korea, Iran, Iraq, Pakistan, Israel, and others over the last decade or more. It will remain true with India.

If the process set in place by the Joint Statement were to continue in a positive direction, it could create a more sound, broad-based nonproliferation community with the tools necessary to deal with the different circumstances of the real world.

It could further integrate our nonproliferation goals into our national strategy and those of others, permitting us to more effectively deal with the increasing availability of destructive technology in the global economy and the persistence of dangerous actors, both state and nonstate.

I would urge the Congress to focus on the dynamics of the process and the goals to be achieved as a result of the United States-India Joint Statement rather than attempting to rearrange the pieces of the initial package. Much that one might have detailed in the original package may be more successfully achieved by driving subsequent interactions in the right direction. This can only be done, I believe, if nonproliferation is a centerpiece of strategic engagement rather than a tradeoff. It is best achieved by retaining a viable Nuclear Non-Proliferation Treaty at the core of a broader nonproliferation regime that uses more targeted, embedded engagement to address the fundamental causes and conditions of proliferation. In short, widely shared goals should guide our actions, but implementation will fail if a “one-size-fits-all” mentality is applied rigidly to different circumstances. Let me clarify what I mean by addressing the three questions you have asked.

*(1) If there is need to draw closer to India for strategic reasons, what are those reasons, and why does civil nuclear cooperation weigh so heavily among them?*

The NPT was designed to enhance the benefits for membership, but for India, a nonsignatory, restrictions on civilian nuclear cooperation are deeply resented in India because they are seen as punitive, discriminatory, and demeaning. The emotional quotient is high. Yes, India’s nuclear power infrastructure has suffered from lack of access to outside technology and uranium shortages could become a major factor in India’s nuclear power future, but that future still remains very uncertain. India’s nuclear elite is divided on what it wants and why. One can imagine a major scale-up of India’s nuclear power, but it is not clear private investment will be there. Even smaller public investment may be unwise if it continues the weaknesses of the current programs. Neuralgia over the nuclear issue is intense primarily because it triggers deeper seated resentments.

Relations between the United States and India have long been far worse than the objective conditions warrant. The reasons are too numerous to list. Again, they are not primarily about nuclear cooperation. South Asia was a backwater of United States diplomacy during the cold war, and cooperation was made difficult by India’s socialist orientation, nonaligned tactics that often tilted toward the Soviet Union, and a related testiness toward the West as a result of its colonial experience. In the United States, there were many “Years of India,” none of which seemed to last even that long. Indian nonproliferation policy was draped in grandiose disarmament rhetoric that provided moral top cover for the nuclear weapons program that gave its population much satisfaction. Thus, India has often been unwilling to take “Yes” for an answer. Long a leading advocate of a Comprehensive Test Ban, it backed away when rapid negotiations threatened options to demonstrate its nuclear prowess. One of the godfathers of the Fissile Material Cut-Off, India has been satisfied to see it buried in a moribund Conference on Disarmament. In short, India has serious security concerns, but its behavior is often driven by concerns about status.

What has changed? Much. The end of the “Permit Raj” and the opening up of the Indian economy has emboldened a huge, highly educated middle class. The new demographics are also compelling. It is not just that India will have the world’s largest population in 2030. It will be experiencing the so-called “demographic dividend,” as the falling fertility rates and improved health increase the ratio of workers to dependents in ways that have historically driven economic growth. A global, high technology Indian diaspora is now networked and returning skills and investments to India. India is proud of its information technology and seeks to do the same in biotechnology. And if messy domestic politics is a signature of democracy, then India is clearly a democracy. This too can provide a basis for a new relationship with an India that may be more able to look more self-confidently to its real interests and leave the politics of resentment behind.

As an economic, cultural, and strategic partner, India could offer much in the years ahead, especially if adverse geostrategic developments in the Islamic world or Eurasia create economic or security dangers, but a grand strategic partnership is not inevitable. It needs to be groomed. Indian domestic and regional politics are volatile because of economic, class, and ethnic divisions. For all of its tradition of business and trade, South Asia remains a region in which the win-win often seems alien. Spoilers abound domestically and around the region. As Indian power and influence grows, both its ability to help and its ability to do harm will grow. Positive steps will be accompanied by negative steps and vice versa. Most Indians are proud of having tested nuclear weapons, but having made this demonstration, many Indians are now more willing to reach out and to show restraint. We will not always

have overlapping interests, but we can achieve a relationship that is at least as good as the common interests we develop, something we have often failed to achieve in the past.

Strong bipartisan support exists for engaging the emerging India, much of it overly optimistic about near-term possibilities and long-term probabilities. Still, I believe it is the right approach, but we should not let our euphoria cause us to undermine our most effective nonproliferation tools. We should not assume that great economic and strategic gains that would not otherwise be possible would result simply from civilian nuclear cooperation. Rather we should fold our flexibility on civil nuclear cooperation into our efforts to work with India to strengthen the overall nonproliferation regime including improvements in strategic relationships and the international security architecture.

*(2) The July 18 Joint Statement addresses many long-standing Indian concerns about the NPT, the Nuclear Suppliers Group (NSG) and United States law, but what United States concerns about India's past and current nonproliferation policies and laws are addressed by the Joint Statement? Please enumerate these concerns and indicate specifically how they are addressed in the Joint Statement.*

Many United States and Indian concerns are addressed in the Joint Statement, but it is premature to suggest that they will be addressed successfully. What is underway is a phased process. Neither side will be certain of how much will be achieved for some time. Over the years, various Indian interlocutors have floated the idea of separating civilian from nuclear facilities and applying safeguards to them. We have never known the scale of the separation or the quality of the safeguards. If India is serious about nuclear power, then its infrastructure should be declared predominantly civilian with permanent IAEA safeguards. To clarify the separation may take some time, and full implementation of IAEA safeguards could take years. A major shift to safeguard civilian activity would be a positive step worthy of considerable movement on the part of the United States and the international community. A token step would be counterproductive.

India has long had a formal position in favor of a Fissile Material Cut-Off. The Joint Statement reiterates that support and goes further in trying to align India's responsibilities and benefits with those of other "responsible state[s] with advanced nuclear technology." The definition of responsible states with advanced nuclear technology is not clear, but examples might be those that are associated with the ITER fusion program and the GEN IV advanced nuclear reactor programs, countries such as the United States, United Kingdom, Switzerland, South Korea, South Africa, Japan, France, Canada, Brazil, Argentina, China, and Russia. Nearly all already have de facto or de jure fissile material cutoffs, and the rest are committed to such a cutoff. Because the prospects for a FMCT seem so poor in the Conference on Disarmament, perhaps an interim multilateral approach could be put forth with such states with advanced nuclear technology and other relevant states, in part to enhance nuclear security and in part as a "fly before buy" experiment that might lead ultimately to progress on an FMCT in the CD. If India were to join the rest of the advanced nuclear community in this regard, it would be a major contribution.

Perhaps the greatest contribution that India could make to nonproliferation outside its own borders would be to end its guerrilla war against the NPT and support the international community in its efforts to encourage and, as necessary, enforce compliance with obligations. India's stated long-term goals are compatible with those of the NPT, but India's insistence that the NPT is a discriminatory treaty that singles them out has resulted in a regular campaign to undermine support for the NPT. Certainly, it is not too much to expect of India that, in the context of renewed civil nuclear cooperation, the rhetoric against the treaty could be dispensed with. A polite agreement that we have some disagreements should be sufficient. For its part, the United States need not walk away from its view that ultimately we would like to see universal adherence to the NPT, but we have long ago stopped pressing India to join as if the conditions might be near at hand. Getting India to support adherence to treaties, including treaties they do not belong to, should also not be an issue of membership. The greater problem is that India has strategic and economic objectives in addition to whatever nonproliferation goals they may share with the United States. Whether it is NAM politics or its strategic engagement of Iran, these can create serious problems. India cannot be expected to alter its most fundamental interests, but in these areas, we may find a measure of New Delhi's actual commitment to nonproliferation and global partnership.

Within its own borders, the growing concern over nonstate and quasi-state actors places a premium on modern physical security, export controls, counterterrorism, implementation of UNSC Resolution 1540, and support for measures such as the Proliferation Security Initiative (PSI). These are areas in which the United States

and India can work together and gauge each other's commitment by our synergy. In recent years, official Indian policy has been increasingly positive in these areas, but the longer history has clouds. Confidence in effective implementation would be enhanced by more direct, bilateral engagement.

*(3) The policy adopted in the Joint Statement, if fully implemented, will require changes to international nonproliferation rules, rules that apply to nations other than India—in particular it is not clear how those changes would affect United States policy with respect to Iran and North Korea, as well as the nuclear export policies of Russia and China. How can the administration and Congress work to ensure that if rules are changed for India, those changes will not result in other proliferation challenges—and if such consequences are not avoidable, should these rules be changed?*

The nonproliferation rules have constantly been changing, becoming both more restrictive and less restrictive based upon changed circumstances. Perhaps I can illustrate this. In January 1992, at an historic summit of the United Nations Security Council, further proliferation was declared to be a threat to international security, strong words implying strong actions. These world leaders were encouraged in their strong statement by many historic developments. The cold war was over and United States-Russian cooperation was accelerating. Longstanding holdouts who had disparaged the NPT, such as France, China, Brazil, Argentina, and others, were now members. Historic arms control agreements were in place. The first gulf war had imposed on Saddam Hussein's regime an unprecedented, tailored UNSCOM inspection regime that ultimately revealed how badly we had underestimated the WMD capability in Iraq, both nuclear and biological. Just in time, we had learned how difficult it is to assess what really goes on in the global world of dual use technology. Enhanced nonproliferation initiatives were being expanded. On the Korean Peninsula, a North-South denuclearization agreement had been completed, and North Korea had finally concluded an IAEA safeguards agreement. The two Koreas were also negotiating a North-South bilateral inspection regime that would create a stronger NPT plus regime in that troubled region. Going beyond the Joint Verification Experiments and the laboratory-to-laboratory exchanges, the Nunn-Lugar programs were expanding the frontiers of engagement and transparency. Both the international norms and the means to engage concretely and in detail on their behalf were being enhanced with more hands-on flexibility.

No sooner had the Security Council Summit spoken, than the remaining challenges became clear. Talks between the two Koreas on bilateral inspections stalled. Then implementation of the North-South denuclearization agreement under which both Koreas agreed to give up both reprocessing and enrichment finally collapsed when North Korea was revealed to have a covert reprocessing plant. When Pyongyang refused to permit an IAEA special inspection and announced it would withdraw from the NPT, the international community could not agree that this was a matter for the Security Council. Instead, the world turned to the United States to solve the problem, with great pressure applied on the United States to use carrots rather than sticks. However vital, nonproliferation began to lose its urgency. To buy time, an Agreed Framework was negotiated with North Korea under which new nuclear reactors would be provided Pyongyang as part of a process for resolving outstanding issues. Russians complained that the Agreed Framework subsidized a non-compliant North Korea even though the United States had opposed Russian sales of similar reactors when Pyongyang was thought to be compliant. Russia cited the Agreed Framework in rejecting United States opposition to reactor sales to Iran, which was then accepting IAEA inspections. And of course many Indians noted that reactors that were denied India, a democracy that was not party to the NPT, were being supplied to a North Korea in open violation of the NPT and still threatening to complete its withdrawal from the treaty. Whatever the merit of such protestations, they remind us that the difficult cases and changed circumstances have resulted in modifications to our basic approaches in the past, not always with good results. Sometimes, we bowed to the inevitable. We once had very tight limits on computer exports, but long ago we decontrolled far more capable machines because of foreign availability. Sometimes, we have been able to expand restraint. Because of the close association of enrichment and reprocessing with nuclear weapons potential, the United States and others have pressed for a further narrowing of the access of additional states to those technologies. Under the terms of the Joint Statement, India has agreed to join in this selective approach as it undertakes not to transfer enrichment and reprocessing technologies to those who don't have them and to support international efforts to limit their spread.

Once again, we are faced with the challenges of achieving our basic goals under different circumstances. Common rules and criteria can be useful, but they can also

be self limiting and counterproductive if they prevent us from developing different rules for different circumstances to promote the same goal. Of course, we need to keep in mind the real measures of merit. Too often we measure nonproliferation only by the number of benign and compliant states that have adhered to the treaty rather than by assessing the real state of proliferation capability and intent in a world in which much more potential is now latent.

Mr. Chairman. In summary, the Joint Statement creates opportunities to strengthen nonproliferation by engaging India and reducing some of the stresses on the NPT that result from India's pariah status on civilian nuclear cooperation. A failure by India to step up to its side of the bargain fully and to continue to move in the direction of cooperation and restraint, however, could create dangers for an NPT-centric regime that is having difficulty because of noncompliance, weak enforcement, the spread of WMD capability into troubled regions, and the rise of dangerous nonstate or quasi-state actors. Ultimately, states will remain committed to nonproliferation, and members of the NPT will remain within the regime, only if it serves their interest. Many support the NPT because they get civilian nuclear cooperation, but most support the NPT because it enhances their security. So long as the NPT serves their interests, the emergence of asymmetric arrangements to deal with different circumstances is manageable and necessary. Unfortunately, such arrangements can serve as a pretext for withdrawal or nonsupport when the treaty itself no longer serves the interests of specific parties. To strengthen the NPT, we need to enforce compliance and concentrate on enhancing its value to its members rather than focusing on punishment of those who have not yet adhered, all of which are nations with which we have friendly, if sometimes difficult, relations.

The CHAIRMAN. Thank you very much, Mr. Lehman. We really appreciate, once again, your contribution today.

You mentioned your association with me. Let me explain that you and our next testifier, Ash Carter, have been a part of this Policy Advisory Group since the time of the Indian Summit, and really before. These issues of the Non-Proliferation Conference that occurred this year, quite outside the Indian agreement, were extremely important in this area. And Senator Biden has mentioned his desire for all of us to sit around the table for a while. I would simply indicate, we've been sitting around the table, and we will be sitting around some more, because all of us need the education that comes from the expertise of people who have been there for a long time in public policy, and you have been.

With that, I would like to recognize Ash Carter for his testimony.

**STATEMENT OF HON. ASHTON B. CARTER, CODIRECTOR,  
PREVENTIVE DEFENSE PROJECT, BELFER CENTER FOR  
SCIENCE AND INTERNATIONAL AFFAIRS, HARVARD UNIVER-  
SITY, CAMBRIDGE, MA**

Mr. CARTER. Thank you, Mr. Chairman. And it is a privilege for me to be here and also to serve you on the Policy Advisory Group.

And I'll just say the same thing Ron Lehman, my friend and co-chair of that group, said already, which is that though the PAG is working on this problem, I am speaking now on my own behalf, my own analysis, and not for your advisory group, as a whole. And, moreover, that advisory group has been focusing on the nuclear aspects of the deal, and I'd like to paint on a wider canvas, if I may, and emphasize the need to look at the India deal through a wide lens, because most of the discussion and controversy associated with the India deal has focused on its nuclear aspects. And since preventing nuclear war and nuclear terrorism is, I believe—and I know you believe, Mr. Chairman, from all you've done for that cause—is the single highest priority for American national security policy, now and as far into the future as I can see. I have some

sympathy with this emphasis, but I don't believe this deal can be assessed properly within this narrow frame. In fact, when viewed as a nuclear-only deal, it's a bad deal for the United States.

Washington recognized Delhi's nuclear status in return for, I would say, little in the way of additional restraints on India's nuclear arsenal, or additional help with combating nuclear proliferation and terrorism, or at least not additional help that India wasn't already committed, or inclined, to give, and at appreciable—not grave—but appreciable likely cost to our nuclear nonproliferation objectives in other critical regions. But it seems clear to me that President Bush did not view the India deal through a nuclear-only lens, and neither should we.

The United States, in this view, gave the Indians what they've craved for 30 years, which is nuclear recognition in return for a strategic partnership between Washington and Delhi. Washington gave, on the nuclear front, to get something on the nonnuclear front.

I agree strongly with the administration that a strategic partnership with India is in the deep and long-term United States security interest. A nuclear-recognition quid for a strategic-partnership quo is, therefore, a reasonable framework for an India deal. However, as a diplomatic transaction, the India deal is quite uneven. First of all, a United States-Indian strategic partnership would seem to be in India's interest, as well as ours. So, why do we have to give them something for it? Second, the deal is uneven in its specifics. What the United States gives is spelled out quite clearly, but what India gives in return is vaguer. And, third, the deal is uneven in timing. We gave something big up front, and what we stand to get lies further out in the future.

Should Congress reject the India deal as too uneven? I would recommend, instead, trying to improve the diplomacy to rebalance the deal. There are two ways this can be done. The United States can give less, or it can expect more. My statement takes the second approach: Aiming to define a set of expectations for specific benefits to the United States from a strategic partnership with India.

It's premature, I would say, to judge whether the expectations that I will describe below, and which were apparently foreseen by the United States side, are shared by India and will, in fact, materialize. And the deal, itself, therefore, was premature. And the risk with the poorly prepared diplomatic initiative is that disenchantment will set in on both sides. That's the risk. But the deal is now an accomplished fact, and I think that we and the Indians must do our best to build upon it.

Let me say what India got and then, very briefly, what we might hope to get in return.

India obtained de facto recognition of its nuclear weapons status. The United States will behave, and urge others to behave, as if India were a nuclear weapons state under the NPT. We won't deny it most nuclear technology or commerce, we won't require it to put all of its nuclear facilities under IAEA safeguards, only those that it declares to be civil.

Beyond these technicalities, nuclear recognition confers an enormous political benefit on India. In effect, it allows India to transcend the nuclear box that has for so long defined its place in the

international order, jettison at last its outdated nonaligned movement stances and rhetoric, and occupy a more normal and modern place in the diplomatic world. Proponents and critics of the deal, alike, agree that this is huge.

Some other supposed benefits of the deal don't survive close scrutiny, and one is energy security, Senator Chafee, an issue you raised, which is terribly important to both India and the United States. And we want India's huge population, as Under Secretary Burns emphasized, to satisfy its energy needs without contributing further to the problems of dependence on Middle East oil, environmental issues, global warming, and so forth. But the arithmetic does not support the case that nuclear power will spell the difference for India, though it can, and should, play a role.

For the foreseeable future, electricity generation in India will be dominated by coal-burning. That's just a fact. Burning coal more cheaply and more cleanly would do more than any conceivable expansion of nuclear power to aid India's economy and the environment. And nuclear power does nothing to address the principal Indian oil-consuming sector, which is cars and trucks, since these don't run off the electrical grid, and won't for a long time. Moreover, the type of nuclear assistance the United States is best positioned to provide, which is light-water reactors, is at odds with India's vision of a civil nuclear power program based on breeders.

It's also said that the deal will require India to improve its laws and procedures for controlling exports or diversions of sensitive nuclear technology, preventing an Indian A.Q. Khan, but, to my knowledge, India has a good record of controlling nuclear exports, though not always ballistic missile exports. India is already bound by the United States-sponsored U.N. Security Council Resolution 1540, which requires such good conduct. So, on paper at least, Delhi has sold the same horse a second time in this deal.

In any event, the United States intends to justify the deal's nuclear recognition to other nations around the world on the grounds that India's nuclear proliferation behavior is already exemplary. So, it will be difficult to argue this point both ways at the same time.

Let me now say what Washington should expect to get from this deal, and I'll simply list these items. My testimony spells them out more—at greater length.

First, immediate diplomatic support to curb Iran's nuclear program. That's been discussed by others.

Second, potential counterweight to China. Let me pause on this one just a moment. No one wants to see China and the United States fall into strategic competition, but neither can anyone rule this out. The evolution of United States-China relations will depend on the attitudes of China's younger generation and new leaders, on Chinese and United States policies, and on unpredictable events, like a crisis over Taiwan. It is reasonable for the United States to hedge against a downturn in relations with China by improving its relations with India; and for India to do the same. But, for now, India is intent on improving its relations in trade with China, not antagonizing China. Neither government will wish to talk publicly, let alone take actions now, pursuant to this shared,

but hypothetical and future, common interest. But it's there. It's on the list.

The third is assistance in a Pakistan contingency. Again, I won't elaborate. Governments won't be talking about that, I would imagine, but it is an important item.

Fourth, joint action of the Indian military with the United States military in operations outside of the United Nations context.

Fifth, military access and basing. Not now. Sometime in the future.

Sixth, preferential treatment for United States industry in India's civil nuclear expansion.

Seventh, preferential access for United States defense industry to the Indian defense market.

And, eighth, additional contributions to nuclear nonproliferation from India's nuclear program, of a kind that I'm sure some of my colleagues will spell out here and Robert Einhorn has spelled out.

Let me close by asking: Will we actually get these benefits of the India deal? The list above is very substantial, even breathtaking. And the question is: How realistic is it?

Some of the items on this list reflect joint common interests of India and the United States. The United States might, therefore, have had many of these benefits without having to pay the nonproliferation costs associated with nuclear recognition for India. Most of the items on the list are also hypothetical and lie in a future that neither side can predict. This is certainly the case with respect to the China counterweight and Pakistan contingency items. Other items on the list, like Iran's nuclear program, will unfold sooner.

The United States can certainly hope that India will behave as a true strategic partner in the future across all the items on this list, but I believe that we may also find, when we ask India to do something they are reluctant to do, that we come to regret having played our big diplomatic card, nuclear recognition, so early in the process.

Finally, and I am repeating something that Senator Biden was kind enough to quote, but I—it's important enough—to me, at least—that I'd like to say it. India, itself, as befits a great nation on its way to global leadership, will have its own opinions about this list that I just made. Some American proponents of the Indian deal have compared it to Nixon's opening to China, a bold move based on a firm foundation of mutual interests, but more a leap of trust than a shrewd bargain.

Mao and Nixon, however, had a clear and present common enemy—the Soviet Union—not a hypothetical set of possible future opponents. But the real difference between the Nixon-Kissinger deal and the India deal is that India, unlike Mao's China, is a democracy. No government in Delhi can turn decades of Indian policy on a dime or commit it to a broad set of actions in support of United States interests. Only a profound, and probably slow, change in the views of India's elites can do this. India's bureaucracies and diplomats are fabled for their stubborn adherence to independent Indian positions regarding the world order, economic development, and nuclear security.

Proponents of the India deal suggest that these positions will yield to the grand gesture of nuclear recognition by the United States. I believe this expectation is naive.

Americans view the change of longstanding and principled non-proliferation policy to accommodate India as a concession. India views it as an acknowledgment of something to which they have long been entitled. This is not a durable basis for a diplomatic transaction.

Mr. Chairman, members of the committee, it's, therefore, premature to tell whether the United States will achieve security benefits from the India deal that outweigh the costs. That means the deal itself was premature. At this point, the United States, including the Congress, can only do its best to ensure that its benefits are fully realized by both parties.

Thank you.

[The prepared statement of Mr. Carter follows:]

PREPARED STATEMENT OF HON. ASHTON B. CARTER, CODIRECTOR, PREVENTIVE DEFENSE PROJECT, BELFER CENTER FOR SCIENCE & INTERNATIONAL AFFAIRS, HARVARD UNIVERSITY, CAMBRIDGE, MA

Mr. Chairman and members of the Committee on Foreign Relations, thank you for inviting me to testify before you about the benefits and costs of the deal between India and the United States reflected in the July 18 Joint Statement between President Bush and Prime Minister Singh, which for brevity I will refer to simply as the India Deal.

Chairman Lugar has charged his Policy Advisory Group (PAG), which I cochair, with assessing the India Deal and advising him on its pros and cons, and with recommending steps the Congress should take to ensure that the final version of the Deal best serves U.S. interests. The PAG, like the committee itself, has not yet had the opportunity to hear all sides of the issue and make its recommendations. My statement today therefore reflects my own analysis and does not represent the views of the PAG.

#### THE NEED TO LOOK AT THE INDIA DEAL THROUGH A WIDE LENS

Much of the discussion—and controversy—around the India Deal focuses on its nuclear aspects. Since preventing nuclear war and nuclear terrorism is the single highest priority for American national security—now and as far into the future as I can see—I have some sympathy with this emphasis. But I believe the Deal cannot be assessed within this narrow frame. In fact, when viewed as a nuclear-only deal, it is a bad deal for the United States. Washington recognized Delhi's nuclear status in return for little in the way of additional restraints on India's nuclear arsenal or help with combating nuclear proliferation and terrorism (that India was not already inclined or committed to give), and at appreciable likely cost to its nuclear non-proliferation objectives in other critical regions.

But it seems clear that President Bush did not view the India Deal through a nuclear-only lens, and neither should we. The United States, in this view, gave the Indians what they have craved for 30 years—nuclear recognition—in return for a “strategic partnership” between Washington and Delhi. Washington gave on the nuclear front to get something on the nonnuclear front. I agree strongly with the administration that a strategic partnership with India is in the deep and long-term United States security interest. A nuclear-recognition quid for a strategic-partnership quo is therefore a reasonable framework for an India Deal.

However, as a diplomatic transaction the India Deal is quite uneven. First of all, a United States-Indian strategic partnership would seem to be in India's interest as well as ours. So why give them something for it? Second, the Deal is uneven in its specifics—what the United States gives is spelled out quite clearly, but what India gives in return is vaguer. Third, the Deal is uneven in timing—we gave something big up front, but what we stand to get lies further out in the future.

Should Congress reject the India Deal as too uneven? I would recommend instead trying to improve the diplomacy to rebalance the Deal. There are two ways this can be done: The United States can give less, or it can expect more. My statement takes

the second approach—aiming to define a set of expectations for specific benefits to the United States from a “strategic partnership” with India.

My statement is divided into three parts: First, I describe what India got. Second, I describe what the United States should aim to get. Third, I assess the chances that U.S. expectations will actually be met.

It is premature to judge whether the expectations of this partnership as apparently foreseen on the United States side are shared by India and will, in fact, materialize. The Deal itself was premature. The problem with a poorly prepared diplomatic initiative is that disenchantment will set in on both sides. But with the Deal now an accomplished fact, we and the Indians must do our best to build upon it.

#### WHAT DELHI GOT

India obtained de-facto recognition of its nuclear weapons status: The United States will behave, and urge others to behave, as if India were a nuclear weapons state under the NPT. We will not deny it most civil nuclear technology or commerce. We will not require it to put all of its nuclear facilities under IAEA safeguards—only those it declares to be civil. It is worth noting that even if the administration wished to make India a formal Nuclear Weapons State under the NPT (which it in fact refused to do), it probably could not persuade all the other signatories of the NPT to agree to the formal change.

Beyond these technicalities, nuclear recognition confers an enormous political benefit on India. In effect, it allows India to transcend the nuclear box that has for so long defined its place in the international order, jettison at last its outdated Non-Aligned Movement stances and rhetoric, and occupy a more normal and modern place in the diplomatic world. Proponents and critics of the Deal alike agree that this is huge.

The Deal has accordingly been popular in India. Criticism from the Bharatiya Janata Party (BJP) has been narrow and technical and probably reflects regrets that a Prime Minister from the Congress Party and not the BJP secured the Deal. The other source of criticism has been leftists in the Congress Party. They are wedded to the old politics of the Non-Aligned Movement which was overtaken by the end of the cold war, but they are unlikely to be able to block the Deal.

The Joint Statement contains a list of other items—civilian space cooperation, agricultural exchanges, HIV/AIDS cooperation, “promot[ing] modernization of India’s infrastructure,” and so on—that comprise Delhi’s long-standing list of desires. There is little in here for the United States.

Other supposed benefits of the Deal do not survive close scrutiny. Energy security, for example, is terribly important to both India and the United States. We want India’s huge population to satisfy its energy needs without contributing further to the problems of dependence on Middle East oil, pollution, and global warming. But the arithmetic does not support the case that nuclear power will spell the difference for India, though it can and should play a role. For the foreseeable future, electricity generation in India will be dominated by coal burning. Burning coal more cheaply and more cleanly will do more than any conceivable expansion of nuclear power to aid India’s economy and the environment. And nuclear power does nothing to address the principal Indian oil consuming sector—cars and trucks—since these don’t run off the electrical grid and won’t for a long time. Moreover, the type of nuclear assistance the United States is best positioned to provide (light water reactors operating on low-enriched uranium fuel) is at odds with India’s vision of a civil nuclear power program built primarily around breeder reactors.

It is also said that the Deal will require India to improve its laws and procedures for controlling exports or diversions of sensitive nuclear technology—preventing an Indian A.Q. Khan. But to my knowledge India has a good record of controlling nuclear exports (though not always ballistic missile exports). India is already bound by the U.S.-sponsored U.N. Security Council Resolution 1540 which requires such good conduct, so on paper at least Dehli has sold the same horse a second time in the Deal. In any event, the United States intends to justify the Deal’s nuclear recognition to other nations around the world on the grounds that India’s nuclear proliferation behavior is already exemplary. It will be difficult to argue this point both ways at the same time.

Missile defense cooperation is also cited in the Joint Statement. The United States has had the world’s largest and most technically proficient missile defense R&D program for many years; it is doubtful the United States can learn much from India in this field of military science, though India will benefit from United States knowledge. Basing United States missile defense radars or interceptors on Indian soil would not be of much benefit to the United States (in the way that such facilities in Japan, Great Britain, or Poland are useful), since with a few exotic exceptions

the trajectories of ballistic missiles heading to targets of United States interest do not pass close to Indian airspace. Finally, it is possible that the administration expects India to purchase United States missile defense systems like THAAD to protect India from Pakistani and Chinese missile attack. Buying such defense systems would benefit United States industry and, through economies of scale, subsidize DOD's own purchases of missile defenses . . . but it is unlikely that India will make purchases of integrated BMD systems on that scale.

#### WHAT WASHINGTON SHOULD GET

What is it then that the United States might expect from the "strategic partnership" in return for nuclear recognition and other items of interest to Delhi in the Joint Statement?

I would suggest that over the long run the United States would be expecting the following strategic benefits from the India Deal:

*Immediate diplomatic support to curb Iran's nuclear program.* India will need to abandon its long-standing policy of rhetorical support for the spread of nuclear fuel-cycle activities and compromise, to some extent, its friendly relations with Iran. India's September 24 vote with the United States and its European partners in the IAEA Board of Governors, finding Iran in noncompliance with its NPT obligations (and containing an implicit threat to refer the matter to the United National Security Council) was a welcome suggestion that India's support in the international struggle to curb Iran's nuclear ambitions will be firm. But India's continued firmness in this and other urgent counterproliferation efforts will be an early test of the value of strategic partnership and its new status.

*Potential counterweight to China.* Though no one wants to see China and the United States fall into strategic competition, neither can anyone rule this out. The evolution of United States-China relations will depend on the attitudes of China's younger generation and new leaders, on Chinese and United States policies, and on unpredictable events like a crisis over Taiwan. It is reasonable for the United States to hedge against a downturn in relations with China by improving its relations with India, and for India to do the same. But for now India is intent on improving its relations and trade with China, not antagonizing China. Neither government will wish to talk publicly, let alone take actions now, pursuant to this shared—but hypothetical and future—common interest.

*Assistance in a Pakistan contingency.* Avoiding and responding to dangers from Pakistan is another common interest that is awkward for either India or the United States to acknowledge. Pakistan, alongside Russia, belongs at the center of our urgent concern about nuclear terrorism—a concern Chairman Lugar has done so much to address. Terrorists cannot make nuclear bombs unless they obtain enriched uranium or plutonium from governments who have made these materials. The exposure of the A.Q. Khan network in Pakistan makes clear that Pakistan has to be regarded as a potential source of vital materials for nuclear terrorists—whether by theft, sale, diversion by internal radical elements with access to bombs or materials, change of government from Musharraf to a radical regime, or some sort of internal chaos. Which version of the A.Q. Khan story is more alarming—that the government and military of Pakistan was unaware of what he was doing, or that they were aware and permitted it? Either way it illustrates a serious danger. Were there to be a threat or incident of nuclear terrorism originating in Pakistan, the United States would want to act in concert with as many regional players as possible, including India.

The Pakistan contingency is even more difficult for the newly minted "strategic partners" to acknowledge publicly, let alone to act upon. India seems intent on improving its relations with Pakistan—despite the recent bombings in Delhi and their impact on public opinion—and a rapprochement between these long-time antagonists is in the U.S. interest. The United States, for its part, has important interests at stake with the Musharraf government—among them supporting the search for Osama bin Laden and other terrorists on Pakistani territory, arresting the growth of radicalism in Pakistan's population, and stabilizing Afghanistan—and can ill afford the perception of a "tilt toward India." For now, therefore, the Pakistan contingency, like the China counterweight, remains a hypothetical and future benefit of the India Deal.

*Joint action with the U.S. military in operations outside of a U.N. context.* India has historically refused to join the U.S. military in operations outside of the context of a U.N. mandate and command. In the future, when the United States needs partners in disaster relief, humanitarian intervention, peacekeeping missions, or stability operations, the United States can reasonably expect India to cooperate. Judging from the evolution of United States security partnerships in Asia and Europe

(especially NATO's Partnership for Peace), anticipation of joint action can lead first to joint military planning, then progressively to joint exercises, intelligence sharing and forging of a common threat assessment, and finally to joint capabilities. This is the path foreseen for a deepening United States-India strategic partnership in the defense field.

*Military access and basing.* There could be occasions when access for and, if needed, basing of United States military forces on Indian territory would be desirable. At first this might be limited to port access for United States naval vessels transiting the Indian Ocean and overflight rights for United States military aircraft, but in time it could lead to such steps as use of Indian training facilities for United States forces deploying to locations with similar climate (the way German training areas were used for forces deploying to the Balkans).

*Preferential treatment for United States industry in India's civil nuclear expansion.* The authors of the India Deal might have anticipated preferential treatment for United States industry in construction of Indian nuclear reactors and other civil power infrastructure made possible by the Deal. But there are two barriers to realization of this U.S. benefit. First, the United States must secure preferential access for its nuclear industry at the expense of Russian and European suppliers who are also seeking access to the Indian market. Second, the United States will also need to persuade India to focus its nuclear power expansion on light water reactors, not the exotic and uneconomical technologies (e.g., fast breeders), that the Indian nuclear scientific community favors. This benefit should therefore not be exaggerated.

*Preferential access for United States defense industry to the Indian market.* India is expected to increase the scale and sophistication of its military, in part by purchasing weapons systems abroad. In view of its concessions in the India Deal, the United States can reasonably expect preferential treatment for United States vendors relative to Russian or European vendors. Early discussions have included the F-16 and F-18 tactical aircraft and the P-3C Orion maritime surveillance aircraft.

*Additional contributions to nuclear nonproliferation from India's nuclear program.* Finally, many commentators and nonproliferation experts have recommended that Congress urge the administration to pursue Indian agreement to certain additional steps, not spelled out in the Bush-Singh Joint Statement, to "even up" the nuclear portion of the Deal. These proposed additional steps by India include: Agreeing to cease production of new fissile material for weapons (as the Nuclear Weapons States have done); agreeing to forego indigenous enrichment and reprocessing for its civil nuclear power program in favor of the international fuel cycle initiative proposed by President Bush in February 2004; separating its civil and military nuclear facilities permanently and in such a manner that all reactors producing electricity are declared "civil," and so forth.

#### WILL THE UNITED STATES GET THE BENEFITS OF THE INDIA DEAL?

The list above is a very substantial—even breathtaking—set of potential benefits to the United States of a strategic partnership with India. How realistic is it?

Some of the items on this list reflect joint, common interests of India as well as the United States. The United States might therefore have had many of these benefits without having to pay the nonproliferation costs associated with nuclear recognition for India.

Most of the items on the list are also hypothetical and lie in a future that neither side can predict—this is certainly the case with regard to the China counterweight and Pakistan contingency items. Other items on the list, like Iran's nuclear program, will unfold sooner. The United States can certainly hope that India will behave as a true "strategic partner" in the future across all the items on this list. But I believe we may also find, when we ask India to do something they are reluctant to do, that we come to regret having played our big diplomatic card—nuclear recognition—so early in the process.

India, as befits a great nation on its way to global leadership, will have its own opinions about this list. Some American proponents of the India Deal have compared it to Nixon's opening to China—a bold move based on a firm foundation of mutual interest, but more a leap of trust than a shrewd bargain. Mao and Nixon, however, had a clear and present common enemy—the Soviet Union—not a hypothetical set of possible future opponents. But the real difference between the Nixon-Kissinger deal and the India Deal is that India, unlike Mao's China, is a democracy. No government in Delhi can turn decades of Indian policy on a dime or commit it to a broad set of actions in support of United States interests—only a profound and probably slow change in the views of India's elites can do this. India's bureaucracies and diplomats are fabled for their stubborn adherence to independent positions regarding the world order, economic development, and nuclear security. Proponents of

the India Deal suggest that these positions will yield to the grand gesture of nuclear recognition by the United States. I believe this expectation is naive. Americans view the change of long-standing and principled nonproliferation policy to accommodate India as a concession. India views it as acknowledgement of something to which they have long been entitled. This is not a durable basis for a diplomatic transaction.

Mr. Chairman and members of the committee, it is therefore premature to tell whether the United States will achieve security benefits from the India Deal that outweigh the costs. That means the Deal itself was premature. At this point, the United States, including the Congress, can only do its best to ensure that its benefits are fully realized—by both parties.

The CHAIRMAN. Well, thank you very much, Ash Carter. We really appreciate that analysis.

We turn now to Mr. Henry Sokolski and ask for your testimony.

**STATEMENT OF HENRY D. SOKOLSKI, EXECUTIVE DIRECTOR,  
NONPROLIFERATION POLICY EDUCATION CENTER, WASHINGTON, DC**

Mr. SOKOLSKI. Mr. Chairman, I didn't have a chance to read that testimony, but, having heard it, I think it's pretty good. [Laughter.]

And I think it's worth rereading. And I think everyone should then, as a very subordinate exercise, take a look at what I have to say, because I think, actually, there is pretty substantial agreement on that analysis, at least in my testimony.

Having worked on the Hill, I was always reminded: Keep it simple. So, I have, in the back of my testimony, pictures. I'm told they're worth more than the testimony. And I honestly believe that if anyone takes 5 minutes—that's all I need, is 5 minutes for you to look at those viewgraphs and read the words—several lights will go on that nothing I can say here will help.

Mr. Chafee, you're on a correct beam when you wonder whether nuclear energy is the most leveraged, quickest way to take care of energy requirements in India. I think, as Mr. Carter pointed out, the answer to that is "No." Now, that doesn't mean eventually it may not be important. But no one on this committee, on one in this Congress, should be in any rush, out of fear, that if we don't get nuclear cooperation going immediately with India, somehow you will be choking off the economy of India.

Let me also ask now, before I go through my remarks, that two pieces of research, one commissioned by the Nonproliferation Policy Education Center, that I direct, on India's ICBM program, and one written by an Indian and Pakistani expert—they actually coauthored it—on the nuclear energy program in India, be entered in the record. I recommend that they be read, certainly the second one—it's interesting, you don't see too many joint articles on this topic by Indian and Pakistani experts, and what they have to say is quite telling.

The CHAIRMAN. They will be placed in the record.

Mr. SOKOLSKI. Thank you. Now to the testimony, itself.

My recommendation, based not in—a little bit on the kinds of thinking you've just heard from Mr. Carter, is that Congress needs to recognize that this deal is done, but that the terms need to be clarified. I mean, after all, the Executive is negotiating to clarify them. They have asked you to legislate. Your powers in the Senate and in the House are being asked for to be exercised. You have an active role. You do not have to wait upon the Executive when it

comes to making laws. That is entirely your purview. They get to negotiate, but you get to legislate.

In that regard, I would approach what's been dealt in the following fashion. And I would clarify things in the following way.

I would not go with country-specific legislation. Too much is at stake. My general recommendation is that Congress should authorize implementing nuclear cooperation with India only after New Delhi commits to the restrictions that it claims it wants to adhere to, and that is, they only want to do what other responsible advanced nuclear states are doing now. Well, they have a way to go. And this is also what we claim the deal is about. And, therefore, our team needs to go a little further.

Nothing I'm going to recommend, that follows here, is out of bounds from the agreed statement. I want that to be understood. This is not additional conditions; it's clarification of the conditions already reached, but which are vague.

Congress should accomplish this in a country-neutral fashion by amending the Atomic Energy Act to allow U.S. nuclear cooperation with non-NPT states. That would include Pakistan and Israel, if needs be. In other words, if those countries can do the following five minimal conditions, then maybe we should consider giving nuclear cooperation with them, as well.

First, non-NPT states who seek U.S. and international civilian nuclear cooperation have to forswear producing fissile materials for military purposes. Every other nuclear weapons state that's an NPT state does this. The full meaning of "full safeguards" or "safeguarding as much as possible" would be, essentially, to have a cap on their program. So, if you push that condition in the agreement to its logical conclusion, it comes to this. Now, the administration doesn't want to ask for that outright, because the Indians don't want to give it outright, at least not immediately. And yet, there it is. I mean, that is the whole point of the safeguarding. And, indeed, if you don't go all the way with the safeguarding, you're not getting very much at all—and I'll explain that in a moment—because they can continue to make weapons.

If they have a nuclear arsenal, forswearing an increase in the net number of nuclear weapons in their arsenal—this is, again, what everyone but China has agreed to—such states would also have to pledge eventually to dismantle their nuclear arsenals, as have all other nuclear NPT weapons states.

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

They must publicly adopt the principles of the Proliferation Security Initiative. And it was quite interesting to hear the administration witnesses' discomfort on that point. They're obviously pushing on that one. So, Congress can help.

Fifth, they must be free of any U.S. nuclear or nuclear-capable missile sanctions for at least 2 years. This is your own rule. A briefing, for sure, needs to be had, privately, on what sanctionable activities has India engaged in since it was last sanctioned. You need to get that briefing from the intelligence community. You

want it to be “nothing.” If there’s anything there, you want to pay attention.

In addition, Congress should seek a briefing on what it would cost the IAEA, beyond its current budget, to safeguard all of India’s stockpiled spent fuel and weaponized—nonweaponized direct-use materials, reactors and fuelmaking plants. It’s my understanding that this is an issue right now, because the IAEA may not be able to even safeguard additional heavy water reactors. You may, as Congress, want to put money in a bill aside for this purpose in support of implementing this deal. In other words, no one should use the excuse that the IAEA can’t do the inspections as a reason for not listing as many facilities as possible to get inspected.

Finally, and something which I don’t think anyone has spoken to, is: How does the administration intend to keep its space launch vehicle assistance from helping India’s ICBM program? That is what this paper is about.

Four weeks after our announcement that we would do space launch assistance, the Indians announced they were going ahead with an ICBM program. The ICBM program is based on their space launch vehicle program. The last time anything was written on this program, Indian officials claimed it was targeted against Europe and the United States. We want to get fully briefed on what this is about and where it stands and how, in fact, space launch vehicle assistance is going to be kept from helping this program. This will only complicate our relations; it will not make it easier. Of course, those in a hurry to seal the nuclear and space deals may chafe at these kinds of conditions. But I think insisting on them is critical. I think they’re, in fact, minimal to make sure that we do not, in fact, indirectly assist their nuclear weapons program.

Both the paper that I asked be entered in the record and this first viewgraph make very clear, if you send lightly enriched uranium from any country, including the United States, just to run the two light-water reactors that we have operating there—they’re called the Tarapur, Units 1 and 2—it’s equivalent to freeing up enough enrichment capacity for India to make 12 more additional bombs a year and/or 75 plutonium bombs if they were to run what’s called mixed-oxide fuel as a substitute for the normal kind of fuel that would go in these plants. That is fairly direct assistance to their weapons program. If you don’t get them to forswear making weapons, or making more material for weapons, that is what the U.S. Congress will be endorsing.

Similarly, with the ICBM program, if we go ahead with space launch assistance that isn’t properly curtailed—that is, I see nothing wrong in helping the Indians launch satellites on other countries’ launchers. I see nothing wrong with giving them data to help us on cosmological questions. They have some of the world’s leading cosmological—cosmo—excuse me—experts on the universe. I’ll escape from that one. But once you assist a program with satellite-dispensing technology and satellite integration, you end up doing what we did with China. And we were all embarrassed by that. And China is not an enemy, but we still didn’t want to do it. The similar point goes here. Those are fairly direct ways in which if we’re not careful, this space and nuclear set of deals could literally and politically explode in ways we don’t want it to.

Given the time, I think I'd better wrap up. I do want to make one comment, though, about China.

I think the last thing anyone would want to do, and is the last thing that's in anybody's interest, is to help India compete against China with nuclear arms. I mean, I—this is really the last thing that anyone should be doing. China has 5 to 10 times the number of deployed nuclear weapons as India, and hundreds more advanced long-range rockets. Although China 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 these into bombs, for fear of sparking a rivalry with Japan, who could go nuclear by bolting the NPT itself. It's something which people on the edge of my community worry about. I mean, it's not the first thing, but Japan has thousands of weapons' worth of separated plutonium, both in Europe and in Japan, sitting. And nobody understands what it's for.

To be sure, the current government may not be interested in ramping up their nuclear ICBM production, but the BJP and its opponents clearly are. If they were to return to power, and we were not to cap, in any way, India's nuclear weapons effort, more Indian weapons would likely be built, which, in turn, would provoke China into a self-defeating nuclear arms rivalry, and this rivalry would not only—also would spark a rivalry with India and Pakistan; and, finally, between China, Japan, and the United States. This is just not a good idea.

Therefore, in conclusion, I hope that Congress actually starts saying, now, through letters, maybe draft experimental senses of the Senate, perhaps bills of any sort, what it thinks the minimal requirements of cooperation should be. I'll tell you why. You will shape those negotiations if you do. If you don't, you will be faced with a fait accompli, and it will be very discomfoting to deal with. I think you, by exercising your constitutional authority, can actually help make sure that this deal gets properly implemented.

Thank you.

[The prepared statement and viewgraphs of Mr. Sokolski follow:]

PREPARED STATEMENT OF HENRY D. SOKOLSKI, EXECUTIVE DIRECTOR,  
NONPROLIFERATION POLICY EDUCATION CENTER, WASHINGTON, DC

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. Improperly implementing them in their current form could not only encourage India to make intercontinental-range ballistic missiles and more nuclear weapons, it could devastate any firm reading of the current nuclear rules, whether they be the Nuclear Nonproliferation Treaty (NPT), the Nuclear Suppliers Group (NSG) or America's own Proliferation Security Initiative (PSI).

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. This should be done in a country-neutral fashion by 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, 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 weapons states.

Second, they must identify all reactors supplying electricity, all research reactors claimed to be for peaceful purposes, all spent fuel 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 nonproliferation obligations they might have had with the United States and other countries.

Fourth, they must publicly adopt the principles of the Proliferation Security Initiative.

Fifth, 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.

To be sure, insisting on these requirements will displease those in a hurry to seal the nuclear and space deals with India. Yet, insisting on such conditions in no way moves the goal posts or raises the bar on the U.S.-India Joint Statement announced July 18, 2005. At the time, both the United States insisted that it does not regard India as a nuclear weapons state under the NPT. As such, it should have been understood that IAEA inspections of India's civilian nuclear facilities might well be tighter than the unique, voluntary spot inspections, that NPT weapons states' facilities are given.

Also, at the time, both United States and Indian officials agreed that India would assume all those restraints that "advanced, responsible nuclear states" 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 United States, Russia, United Kingdom, 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. They 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. Certainly, the credibility and success of United States and allied efforts to curb proliferation in Iraq, Iran, and North Korea has depended heavily on a firm reading of the nuclear rules. The NPT bargain of giving up nuclear weapons to secure international civilian nuclear cooperation also was critical to securing Libya's agreement to give up its nuclear activities, and to South Africa's and the Ukraine's surrender of their nuclear arms. Finally, the United States has an interest in making India behave as the United Kingdom and Japan do, not merely as China or Iran. Indeed, only by insisting on better behavior here will the United States, India, and other responsible nuclear nations have the moral authority required to pressure Iran to limit its unnecessary and dangerous nuclear fuel making and China to stop its expansion of its nuclear weapons arsenal.

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 U.S. 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 United States in the dubious position of:

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

2. Lending technical support to India's intercontinental ballistic missile (ICBM) project, the Surya, an 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, meanwhile, claim India's ICBM is intended to deter Europe and the United States (see attached viewgraphs and 3 and NPEC's newly released study, "India's ICBM: On a Glide Path to Trouble?" by Dr. Richard Speier).

3. Undermining United States 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 United States 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.

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 devel-

opments is necessary to enhance United States security against a hostile China or Iran. This, however, reflects an unwarranted, defeatism that is unworthy of the United States. More important, it is strategically misguided on at least three critical counts:

1. India's Foreign Secretary and Prime Ministers insist India's July 18 understandings with the United States 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 primarily to help prevent referral to the United Nations and did not mean that India thought Iran was actually in noncompliance. 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 5 to 10 times the number of deployed nuclear weapons as India and hundreds more advanced long-range ballistic missiles. 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 Japan, who could go nuclear by bolting the NPT and militarizing its own massive, growing stockpile of separated civilian 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—prompting a nuclear arms rivalry, not only between it and India (and, consequently, revving up even more nuclear competition between India and Pakistan), but with Japan and the United States.

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 United States in the imperative areas of antiterrorism, 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 United States spends on its nuclear arsenal and missile defenses alone. Encouraging India to spend in these areas could easily hollow out its conventional military and undermine the very areas most promising for United States-Indian cooperation.

This then brings us to the weakest and least credible arguments for pushing nuclear and space cooperation on an urgent basis; that is that India must have substantial United States cooperation in these fields immediately to sustain its economic growth. In fact, for the near term just the reverse is the case: 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, one should focus first 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 United States 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 time (for more details, see attached viewgraphs, 4 through 7).

As for space cooperation in the space launch area, by far the safest, most cost-effective form of cooperation would be to make affordable United States launch capabilities more accessible to India. Certainly, the recent announcement that the United States intends to include Indian astronauts in upcoming United States 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 integration 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 United States-Indian nuclear and space coopera-

tion. Your committee is to be commended for taking the initiative in requesting that any enabling legislation to implement United States-India space and nuclear cooperation be referred to the appropriate committees rather than 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. Under no circumstances, should Congress allow itself to be rushed.

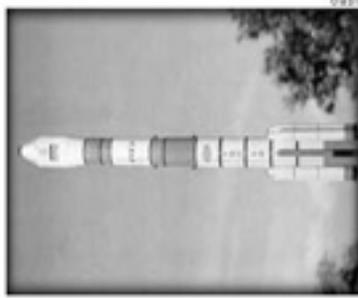
Viewgraph 1

## Light Water Reactor Fuel Sales to India: Potential to Free Up New Delhi'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



## US Satellite Launch Assistance: Help for India's ICBM Program?



India's PSLV (Polar Space Launch Vehicle, pictured, to the left), will serve as the basis for India's ICBM, the Surya.

### PSLV

**Stages** 2 solid, 1 liquid stage  
**Weight** 290 tons  
**Payload** multiple satellites

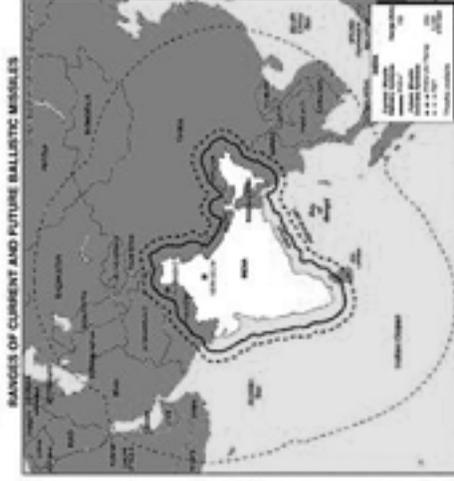
### Surya (India's ICBM)

**Stages** identical  
**Weight** 275 tons (nearly 3 times the size of America's largest ICBM)  
**Payload** multiple warheads

## Viewgraph 3 Why Does India's Need an ICBM: What's the Target?



•India already has the Agni II medium range road-mobile missile (picture above) with a 2,000 km range (mapped above) that can reach most of China, all of Pakistan, and is now being upgraded to cover all of China.



•The Surya, India's ICBM, in contrast, is a fixed launch, first-strike missile that is only useful, if, as Indian officials have claimed, India wants to hit the US or Europe.

Viewgraph 4

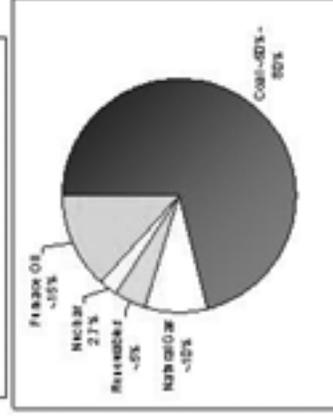
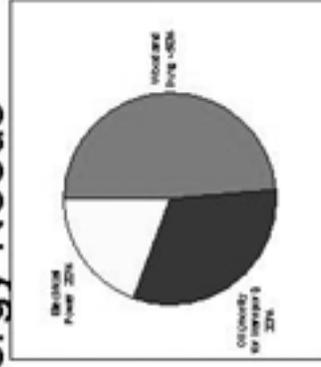
## Nuclear Power: Least Leveraged to Address India's Immediate Energy Needs

Roughly 1/5 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 (see opposite top graph)

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. (see opposite bottom graph)

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



## **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

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

### Are Nonnuclear



- To reduce pollutants and greenhouse gases generally
  - clean up dung-polluted lakes (pictured opposite) by substituting for dung and wood burning with decentralized, non-grid-delivered micro renewable power sources
  - establish efficiency standards
  - encourage increased energy efficiencies
- In the electrical sector
  - Increase supply and use of private sector natural gas
  - implement Indian plans for renewables (12,000 MWe or four times current installed nuclear capacity) over the next decade
  - introduce clean coal technologies



## 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

The CHAIRMAN. Well, thank you very much for those thoughtful suggestions, as well as the pictures and the additions that you have asked to be part of the record. We appreciate that.

Mr. Krepon, would you please proceed?

**STATEMENT OF MICHAEL KREPON, COFOUNDER AND PRESIDENT EMERITUS, HENRY L. STIMSON CENTER, WASHINGTON, DC**

Mr. KREPON. I'll condense my testimony quite a bit.

How do we deconflict, as much as we can, two objectives that we all care so much about: Improving ties with India and strengthening our nonproliferation policy? We can't deconflict them entirely. And I regret to say, Ash, I'm doubtful that the strategic benefits that you've laid out are likely to be realized, at least in major part.

To help the process of deconfliction, I would urge you to work with the administration to affirm a set of first principles that would guide the administration in its negotiations, and that would guide the Congress in considering the end result.

What first principles do I have in mind? I think the first "first principle" is that nonproliferation norms are absolutely essential against dangerous weapons in the most dangerous hands, and that country-specific exceptions to these norms are absolutely corrosive. They're the worst kind of exceptions. Later on I'm going to urge you to consider conditional exceptions rather than country-specific exceptions.

Why are country-specific exceptions so corrosive? It's true, as the administration says, that there are good countries and then there are really problematic countries out there. But if we try to change public law on the basis of good countries versus bad countries, we're in trouble, and we're especially in trouble internationally, because one country's friend may be another country's foe. And if we seek an exception for country A, somebody else is going to seek an exception for country B. Thus, friends and adversaries or problem states, are not clear-cut categories. We have a friend that's also a problem state in this area, next door to India. And sometimes friends become problem states, and sometimes vice versa. I really think this good-guy/bad-guy approach that the administration is drawn to is very corrosive to the norms that have to be the bedrock of our policy.

So, my first principle, my first "first principle," is that norms have to be strengthened a whole lot more than loopholes have to be opened.

Public law for nonproliferation isn't sacrosanct. Our Constitution has been amended. The Congress has been known to amend laws. I don't have a doctrinaire position on our nonproliferation laws. I'm prepared to amend law. But my second "first principle" is that the net effect of any changes in public law should be to strengthen nonproliferation. If we're going to relax laws, then we need to find compensatory steps that strengthen nonproliferation.

My third "first principle" is that no changes in public law should assist the recipient to either enlarge or enhance its nuclear arsenal. That's pretty straightforward. And hearing Bob Joseph today, it seems to me that you're not going to get an argument on this matter if, indeed, you do decide to enter into discussions with the exec-

utive branch, or if you decide to do this on your own and attach guiding principles to some legislative vehicle.

My fourth “first principle” is the principle of proportionality, which is to say that some changes in public law could have modest effects, but other changes in public law, like that proposed by the executive branch, are quite substantial. Since not all changes in public law are equal, I would propose that you consider laying out a set of conditions attached to different types of changes in public law. The more substantial the change in public law, the greater the remedy we would need to shore up our nonproliferation policies.

I’m talking about conditional exemptions, not country exemptions. I would rather that the U.S. Government talk to the Nuclear Suppliers Group and the IAEA on a set of conditions that we would expect others to sign up to in order to engage in nuclear commerce with us. That’s a much better approach, in my view, than for us to declare, “I want an exception for this country,” and then China says, “I want an exception for Pakistan,” and then Russia says, “Well, I want an exception for Iran.”

We could engage in a long meeting about what the different conditions might be. Many conditions have already been presented to you and to your counterpart committee on the House side. But I think I’ve left enough—we’ve all left enough on the table.

[The prepared statement of Mr. Krepon follows:]

PREPARED STATEMENT OF MICHAEL KREPON, COFOUNDER AND PRESIDENT EMERITUS,  
HENRY L. STIMSON CENTER, WASHINGTON, DC

The debate now unfolding on the Bush administration’s nuclear cooperation initiative is not about isolating and penalizing India. India is already the beneficiary of significant changes in U.S. Government policy. The real issue at hand is how to greatly improve bilateral ties without greatly weakening rules against proliferation.

Many ardent admirers of India and staunch defenders of the Non-Proliferation Treaty are conscientiously struggling with this dilemma. The NPT faces a number of problems more severe than India’s nuclear program. But these problems can be compounded by how we handle India. The rules we change on India’s behalf can also weaken the rules we want other nations to abide by.

We can’t sidestep this dilemma by distinguishing, as advocates within the administration do, between friendly states and problem states. Such distinctions are rarely permanent or clear cut. We all know that friendly states can also be problem states, that yesterday’s friend can become tomorrow’s adversary, and vice versa.

Another significant problem with making U.S. nonproliferation policy dependent on country-specific distinctions between good and bad states is that this approach will seriously damage domestic laws and international treaties that set norms against proliferation. Domestic traffic laws don’t allow some people to speed, but not others. Nor do international treaties distinguish between friends and foes, since one nation’s friend can be another’s foe. Instead, the rule of law applies to all. It allows us to distinguish between those who abide by the law and those who break it. Laws still get broken, but that doesn’t diminish the importance of rules. Having rules, laws, and international norms provides the basis for prosecution, coalition building, and enforcement.

I will describe below four fundamental principles that I hope will serve as guideposts for your deliberations:

- Strengthen nonproliferation norms more than you widen loopholes. Country-specific exemptions are bad for norms;
- The net effect of any changes in public law should make proliferation harder, not easier;
- Follow the guideline of proportionally: Link conditions to changes in public law. The greater the exemption sought, the greater the need for compensatory steps against proliferation;
- No exemption should assist the recipient to enhance or enlarge its nuclear arsenal

My first principle is that country-specific exemptions are corrosive to nonproliferation norms. If the United States were to champion a country-specific exemption, there is a strong likelihood that other nuclear suppliers would seek other exemptions, and that the United States would lose leverage to prevent such transactions.

Thus, if after thoughtful deliberation, you conclude that some relaxation of our laws is advisable, I strongly urge you not to do this on a country-specific basis. Instead, I urge you to establish conditions under which the relaxation of public law would apply to any state seeking an exemption that meets congressional conditions. In this way, exemptions would be granted on the basis of performance, not on the basis of a particular country.

A second general principle that I would propose for your consideration is that the net effect of changing public law should be to make proliferation harder, not easier. Put another way, the strengthening effects of the conditions established by the Congress should outweigh the weakening effects of the exemptions granted.

Not all proposed relaxations of public law are equal. Since some kinds of U.S. nuclear assistance would have minimal negative impact on global nonproliferation norms, the conditions set by the Congress to allow for such transactions might also be modest. Conversely, other types of U.S. nuclear assistance could potentially have larger adverse impacts on nonproliferation norms and treaties. In such instances, the Congress might set very stringent conditions—or prohibit such transactions altogether.

To address the fact that there are widely disparate gradations of nuclear commerce, I would propose that the Congress consider a third principle when considering changes to public law—the principle of proportionality. If the Congress deems it advisable to establish conditions associated with U.S. nuclear assistance, different types of assistance might be conditioned on different strengthening measures against proliferation. Minor adjustments in existing law would therefore be possible when modest conditions are met; major adjustments would be possible when significant conditions are met.

The first two principles would mesh with the third: When applying the principle of proportionality, a relaxation of public law should be accompanied by conditions that, in all cases, result in a net strengthening of the global norm of nonproliferation. Moreover, these conditions should not be country specific. Instead, these considerations should apply to every applicant meeting congressional standards.

The fourth fundamental principle that I would urge for your consideration is that the relaxation of U.S. nuclear assistance must not assist the recipient to enhance or enlarge its arsenal of nuclear weapons. If U.S. nuclear commerce were to result in more and more capable nuclear weapons on the part of any recipient, global nonproliferation norms would be dealt a severe blow. The reassertion by Congress of this fundamental objective and purpose of public law is essential because the July 18 Joint Statement by President Bush and Prime Minister Manmohan Singh could lead to this negative result, depending on how it is implemented.

How might these four general principles be applied in the proposed U.S.-India agreement? Let's take a look at both ends of the spectrum reflected in this initiative, and at two cases in between.

The most troubling kinds of nuclear commerce—aside from the outright sale of bombmaking material and bombs—have to do with enrichment and reprocessing. This kind of nuclear commerce offers nations very costly ways to produce electricity, but essential means to produce nuclear weapons, regardless of cost. Given the negative proliferation consequences of commercial trafficking in enrichment and reprocessing technologies, President Bush spelled out his administration's opposition to this practice in a speech delivered at the National Defense University on February 11, 2004:

The world must create a safe, orderly system to field civilian nuclear plants without adding to the danger of weapons proliferation. The world's leading nuclear exporters should ensure that states have reliable access at reasonable cost to fuel for civilian reactors, so long as those states renounce enrichment and reprocessing. Enrichment and reprocessing are not necessary for nations seeking to harness nuclear energy for peaceful purposes.

In the July 18, 2005, Joint Statement, President Bush endorsed a very different formulation. He promised to “work to achieve full civil nuclear energy cooperation with India” and to “seek agreement from Congress [and to] work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India.”

President Bush's February 2004 statement is consistent with a principled position to strengthen nonproliferation norms, much like the one I am asking you to consider. His July 2005 promise appears to carve out an exception to this principled

position. A rules- and norms-based system would seek to set the highest barriers against transfers that could do the most proliferation damage—without exception.

On the other end of the spectrum, the July 18 Joint Statement discusses bringing India into international research efforts related to advanced development concepts for civil nuclear power generation. While the particulars of such engagement matter—since some research and development initiatives could have more utility for nuclear weapon programs than others—in general this type of engagement would be consistent with the general principles advocated here.

Two cases in between these poles are not so easy. One is providing fuel for safeguarded facilities at Tarapur. The other is selling new nuclear power plants to India. Providing commercial assistance to Tarapur, which the Government of India seeks in the near term, would be of far narrower scope than signing contracts for new nuclear power plants, but both steps would be contrary to the “full-scope safeguards” standard that the United States has long insisted that other nuclear suppliers live up to.

In these intermediate cases, the fundamental principles enumerated above ought to apply: Norms should be strengthened, rather than exceptions; the net effect of any changes in public law linked to conditions should strengthen, not weaken, these norms; the principle of proportionality should apply; and no assistance should be given with respect to the military nuclear capabilities of the recipient state. The last of these fundamental principles would mandate that any relaxation of nuclear commerce for particular facilities be linked to the requirement that such facilities be safeguarded in perpetuity. But this still begs the question of what to do about the full scope safeguards requirement that U.S. administrations have finally succeeded in establishing as an international norm.

A key formulation embedded in the July 2004 Joint Statement suggests one way to proceed. Prime Minister Manmohan Singh has stated that his government is “ready to assume the same responsibilities and practices and acquire the same benefits and advantages as other leading countries with advanced nuclear technologies.” This passage suggests that India would be treated in the same way—and would behave in the same way—as the nuclear weapon states recognized under the Non-Proliferation Treaty.

The “equal benefits for equal responsibilities” formulation has some merit. But what would it mean in actual practice? In actual practice, the five nuclear weapon states recognized under the NPT have stopped producing fissile material for nuclear weapons. India has not. In actual practice, the five nuclear weapon states recognized under the NPT have signed the Comprehensive Test Ban Treaty. Three of the five have ratified the treaty. The Senate of the United States has not consented to ratification. But under international law, all five are equally obligated not to undermine the objectives and purposes of this treaty, pending its entry into force. India has not signed the CTBT. Government officials have affirmed, using the present tense, the absence of current plans to test. These statements do not carry equal weight, nor do they impose equal responsibility, to the obligations accepted by the 176 states that have signed the CTBT.

If India were serious about the “equal benefits for equal responsibilities” formulation, then New Delhi would be well advised to favorably consider a moratorium on the production of fissile material for nuclear weapons, and to sign the CTBT. Such steps would clarify that India seeks commercial nuclear transfers to fuel its economic growth and not to increase or enhance its nuclear arsenal. These steps would also clarify that the net effect of the changes Congress is being asked to consider would strengthen, not weaken, global nonproliferation norms. Under the principle of proportionality proposed above, such steps by the Government of India would open up a much wider range of cooperative nuclear endeavors.

While I endorse this structure for handling the dilemmas posed by the Bush administration’s nuclear cooperation initiative with India, I most emphatically do not recommend that the Congress direct the Government of India to take such steps. Any such directive would be counterproductive and deeply offensive to most Indian citizens. India is a proud, sovereign state facing vexing security problems. It will not take dictation from a nation with many thousands of nuclear weapons and large stocks of fissile material that has tested nuclear weapons over 1,000 times.

Decisions regarding a moratorium on fissile material production and nuclear testing are India’s to make. India will make these decisions in light of its perceived security requirements, and not as a result of foreign pressure. We must respect New Delhi’s decisions, which could facilitate or impede nuclear cooperation. Either way, these are New Delhi’s decisions to make. My preferred approach respects New Delhi’s powers of decision, while reinforcing a principled stance by the United States against proliferation.

By laying out a set of fundamental principles associated with changes in public law, and by establishing conditions for different levels of relaxation, the Congress could provide consistency and clarity that are lacking in the July 2005 Joint Statement, while strengthening global norms against proliferation. Improved bilateral ties with India will continue to proceed on many fronts, including trade, investment, nonnuclear energy, agriculture, defense cooperation, and public health issues. There is no compelling reason why improved relations should come at a great cost to the nonproliferation norms that have buttressed national and international security. Working out the particulars associated with a statement of principles and conditions will not be easy. But, in my judgment, this approach could substantially strengthen bilateral relations and nonproliferation norms, rather than pitting one against the other.

The CHAIRMAN. Thank you very much for those additions to our understanding, and for your suggestions for our activity.

Let's have another 8-minute round of questioning to this panel.

And let me begin by indicating that the administration has come forward with what they have described as a strategic plan for an enhanced relationship. They've discussed the history of our relationship with India, and unsatisfactory elements, and how it's improved, but this is designed to be, as I understand, a giant leap forward. It's very country-specific.

Now, I appreciate the legislative suggestions that at least two of you have made that this should not be country-specific, and that, in fact, whatever the administration has done with the summit conference, with the Indian officials here, with visits by our Secretaries to India and so forth, that we ought to stand back and try to perfect the rules of the game with regard to nonproliferation, to try to strengthen that regime. This really is a benefit to India, and to us, and to others. At the same time, Secretary Carter has suggested that, in fact, this is not necessarily a done deal. Still, we're far down the trail. Therefore, leaving aside nonproliferation, there are some broad foreign-policy objectives with regard to our alliance with India, our performance with regard to other countries, or problems that we have in the world that ought to be a part of that. It's a rather daunting list, as he admitted. The Indians might not cede readily, or might not like the list at all. But, nevertheless, there would be benefit to our country.

As I was discussing with the administration witnesses, there are a lot of moving parts. The administration said they would not really approach this with legislative language until this separation of the civilian and the military aspects progressed. This has not occurred as yet, and it's not really clear exactly when that might occur, nor how far it might occur, nor how satisfactorily we all feel that that happened.

So, there is always a work-in-process aspect about what has been perceived and celebrated as a historic new arrangement. I think we ought to be, on this committee, loathe to simply pour rain on the parade, and indicate that this is not all that important. It may have seemed that way for people who were negotiating it. But, all things considered, here are all these things lying out there. I don't really want to take that attitude, personally. I think there are possibilities for our country, for India, for the world, for this thing to progress. On the other hand, it's not clear to me how it's going to.

Mr. Sokolski suggested, before we wait for the administration—that probably won't be interminable, but it's been suggested that it might be into next year—

[Laughter.]

The CHAIRMAN [continuing]. February, March, even some think April—before this progress in India is really identifiable, and all sorts of other things may be happening in the world in the meantime. That's a long time, given the other issues that are in play. So, he has suggested, helpfully, that we propose legislation on our own, to begin with that we don't wait around for this draft; or, absent that, that we offer resolutions, that we make statements on the floor, maybe that we do various things that try to help frame the issues and inform the administration of what seems to have some support here; and maybe that we inform the Indians, in the process, of how sentiment is going at this stage. And that may be possible. This is a daunting process, all by itself. It may be a good idea. Maybe, independently, the distinguished ranking member and I ought to say something, or others should be invited from time to time. But the dangers of this are obvious, too. You have a good number of voices, all spouting off, so to speak, and this may be confusing to Indians and the Indian press, the free press. There has been a lot of democratic discussion over there, as it tries to interpret what in the world is going on here, quite apart from what our counterparts in the House of Representatives may have already said, or may say.

Let me just ask this general question of you. How do we proceed in a responsible way? You've all been involved, in one way or another, in the legislative or administrative procedures of our Government. Thinking of this constructively, as opposed to "gaming" the thing between the committee and the administration or the House or so forth, just outline—if you were in my position, or that of the distinguished ranking member, what would you advise this committee to do? Mr. Sokolski already had a go at that. I don't want to exempt you from answering the question, even after hearing all of this again, but give us some advice regarding the grounding that I've just explained. Would you start, Ron, with your thoughts about this?

Ambassador LEHMAN. Well, that is the big question. In my prepared statement, while I alluded to a lot of things you may want to consider, I actually think the most important point I made was: Be careful. Because although none of these issues are new and almost all the players have been working these issues for some period of time, I think there's actually a lot of confusion out there. And I thought your recommendation that we lock ourselves in a room and get our acts together is really a good idea.

And let me use some specific examples from our testimony today, where, you know, we have tremendous amount of agreement, and our body language is often the same, and yet we're already getting into some trouble. And let me explain what I mean.

I don't want to assert what my colleagues at this panel, or the previous panel, have said, but let me, sort of, use some strawmen, and those who feel offended can speak up for themselves.

Have we recognized India as a nuclear weapons state? Well, in one sense, of course, they're a nuclear weapons state. They have nuclear weapons. But the only way you could really have the relationship with them that you have with a nuclear weapons state would be either to leave the NPT or amend the NPT. And I think

the Indians know that whatever the details are of all of the relationship on the civilian cooperation, the administration, and no administration, is prepared to do with India what it would do with an official nuclear weapons state. OK, we can argue over, "Well, how much do we want to talk about one aspect—they've got 'em—and the other, which is their legal status and what it means in terms of what we can do?" But I think we—those are important distinctions. They matter.

The second is a tactical point I want to make, which is the heart of my prepared statement, which is, there are a lot of people running around, euphoric, about this new strategic relationship, and they want to justify what they've done on civilian nuclear cooperation—

Is that me? Should I shut up?

The CHAIRMAN. No. [Laughter.]

With the forbearance of my colleague, why, you—please go ahead.

Ambassador LEHMAN [continuing]. That there's this great strategic relationship which fully justifies any concessions we make on civil nuclear cooperation. I actually think that most of the positive, and some of the negative, things in the strategic relationship are going to continue, no matter what you do on civil nuclear cooperation. That's why my point is that, to the degree that you play out civil nuclear cooperation, you really ought to keep it focused primarily—not totally, but primarily—on the nonproliferation area. That's where you need to play it.

The next point is over whether or not disagreement is premature. I would argue it's overdue. You know, I've been through so many years of India. And, of course, as everyone has pointed out, they almost never last that long. India has long been the country that can't take yes for an answer. We know how difficult it is to deal with their domestic politics and with their regional problems. Having said that, I would argue that this deal, in some form, is long overdue.

Now, let me join with almost all of the colleagues in this panel, and none of the colleagues in the previous panel, and say: Would I have wanted to do it exactly this way? Probably not. Could I have done better? How do I know? But, clearly, I think the more important point is, it's underway, and it is a process.

Now, you can argue over who pays what when, but, in fact, the bad news, or good news, depending on your perspective, is, that's not resolved. And so, the Congress still has a chance to shape what's going to happen.

But I thought a very important point was made today, which is that, right now, having gone to the—come to the Congress and said, "We're not ready—going to be ready yet, til the Indians act," and having gone to the NSG and said, "We're—you know, we've still got to—work from the Indians," the ball is in the Indian court. They are going to have to pony up on the whole question of civil-military separation. And let me tell you something, that's going to tell a lot about whether this is going anywhere. And so, I think India needs to understand that. This will be a big symbol as to whether or not there's a "there" there.

Finally, on this question of country-specific versus criteria, or norms versus bad-guy lists, it's an old issue, and some of my friends are for the criteria and some norms, and some of my friends are for the lists, and I, of course, am for my friends. The—but I think it's something you can't really understand until you try to work it specifically. But I will argue that the—one of the fundamental weaknesses in the nonproliferation regime today is that we try to apply general universal principles to very different particular cases, and we get into all kinds of trouble. And we've got to find a way to have what is a norm, the norm; what are guidelines, guidelines. And when you have to go down and engage on specific problems, how do you tailor them to the problem? And so, in this case, I think that we're not talking about a lot of cases. We're talking India, Pakistan, and Israel. And I think we can start—ask, "Well, are there criteria that apply to all, or are there enough differences, or are there ways to capture what it is that's different?"

So, I've gone on at length, but what I wanted to do was, kind of, energize the discussion and say, we've got a lot of agreement here, but I think we also have a lot of smoke.

The CHAIRMAN. Well, that's a terrific response. You have energized all of us.

Now, let me ask Senator Biden for his questions.

Senator BIDEN. No, if anyone else wishes to—

The CHAIRMAN. Would anyone like to enter into this?

Yes, Mr. Sokolski.

Mr. SOKOLSKI. Just briefly. By the way, if you spout off, it's a good thing, even if it—any time. I mean, the idea that you're going to be reckless, I just think is very harsh and unfair to yourself. [Laughter.]

So, first thing—

Senator BIDEN. But it would be nice to see. [Laughter.]

Mr. SOKOLSKI. You might—

Senator BIDEN. I haven't seen it yet.

Mr. SOKOLSKI [continuing]. You might surprise us all. [Laughter.]

So, don't worry about that. I think you overcompensated. [Laughter.]

Second of all, if you are worried about that, or you think some of your colleagues will spout off and you're worried about that, how about just asking questions? You have an oversight role, and this hearing—I can tell you, a lot of people got spun up trying to get their charts ready and trying to figure out how to shape what the message is. The more, the better. This is your legitimate constitutional role. So, when I said "get briefings," if you don't like those questions, come up with others, but that is your role, and there are plenty of questions here.

Finally, last point, I cannot imagine the relations between our country and India being anything but better and better and better—dare I say it?—almost irrespective of what our two governments do. And if you have any doubt about that, fill out your tax forms with TurboTax. [Laughter.]

Because if you've got a question, you know who's going to answer it?

The CHAIRMAN. Bangalore. [Laughter.]

Mr. SOKOLSKI. You've got that one right. And if you have any American students that are studying, and they have questions on their Web site education, when it has to do with natural science or math, it's Bangalore again. And it seems to me that if you go to our universities, you'll see a lot of Indian students. That isn't going to change. That's going to just become more and more the case. And the two more neuralgic topics, according to my former boss, Harry Rowen—if you want to get into a really difficult conversation with an Indian—is to talk about nuclear weapons and ICBMs and space launch vehicles and civil nuclear power. The rest of the deals—and there are a lot of them in that July 18 gathering—were pretty darn sound. And I would focus on them. And you will not do anything but improve our relations if you do.

The CHAIRMAN. Thank you. I would just say, anecdotally, I had spent the noon hour listening to Tom Friedman and his discussion of "The World is Flat" again. He pointed out that there are, of course, not only Indian students here, but a lot of Americans interning at Indian firms, a horde of them, on the anticipation that they will be involved in the management of businesses there, quite irrespective of what we're talking about today. The rush is on. But that's a different field altogether.

Mr. SOKOLSKI. If you go to Silicon Valley, every one of the units working on anything that's making money is one-third Asian, one-third Caucasian, one-third Indian.

The CHAIRMAN. Yeah. Yeah.

Ash.

Mr. CARTER. Yeah, I'll be very brief. But, just to respond directly to your question, I think that your question is exactly the one that I have posed to myself, and that is: "How do we be constructive at this point?" I made it clear I wouldn't necessarily have chosen this moment to make this deal. Our President has. We are where we are, and we ought to try to make the best of it. And it seems to me, that has two dimensions to it. One is to make it as clear as we can to India what our expectations are for the upside, why we're willing to take this leap and this risk. And that's what my list represents, the things that we would hope, over time, develop in the way of benefits to us. And the second is that we've paid a price; there is some damage—I wouldn't call it "grievous"; I called it "appreciable" in my statement—to the nonproliferation system, and we ought to try to be softening that downside, minimizing that damage.

So, maximizing the upside benefits, making clear what we hope to get out of it, and trying to get as much momentum going as possible so we realize those benefits, though I understand Michael's skepticism that we will fully realize them; and then, second, recognizing that we're making an exception here that necessarily entails some damage, and being up front about limiting that damage. And if we can spell both of those steps out, the actions pursuant to both of those steps, that's how I think we capitalize on the promise here and soften the downside.

The CHAIRMAN. Michael.

Mr. KREPON. Mr. Chairman, you're already making headway. The State Department's testimony today is far more specific than it has been. It's more forthcoming. It lays down markers. So, you're

making progress. And I—the more you and Senator Biden and others work on this, I think, the more progress you're going to make.

Ash, your list of expectations is going to be explosive in India. It's going to be viewed as yet more evidence that the United States intends to have India on a leash on issues that matter more to the United States than India. And that's poisonous for this deal. So, just a warning flag on that.

The CHAIRMAN. Well, the whole hearing may be seen as provocative. [Laughter.]

Now, isn't it time for Senator Biden to speak and temper this whole thing? [Laughter.]

Senator BIDEN. Oh, there's nothing—everything's perfectly clear. [Laughter.]

Your advice is consistent and totally contradictory. [Laughter.]

The goals are clear. I'm just not sure how to get from here to there. As I think you said, Mr. Lehman, the bottom line of all this is, unless there is an amendment or a change of some kind in the NPT, we're never going to be at the point where we say that India is treated the same as other states, no matter how we dance around it.

You know, I think the most frustrating part of sitting on this committee during the tenure of seven different Presidents has been the reality that many times we're left with only Hobson's choices. We don't get to make foreign policy. We impact on it. We slow it up. We help it detour. Let's assume the House or the Senate derails this agreement. I think there would be consequences. The President has already put this in motion; notwithstanding the fact that India is a democracy and understands how we work and that you need the Congress for this kind of thing, I don't know. The agreement's a pretty powerful tool in India. And I know you've all spoken to that, to some degree. You know, you have to take into account some of that. And you have to factor it in how we proceed from here.

And I agree with you, Michael, that laying out, explicitly, and codifying in this agreement our expectations—I know you're suggesting we codify them, but codifying the expectations, that is pretty explosive stuff in India. But the flip side of that is, trying to figure out a noncountry-specific approach—effectively amending the NPT—that, also, is pretty difficult, and probably not doable in the near term.

So, having said all that, I'm not confused, in that I fully understand what each of you said, but perplexed as to which avenue to choose. Your point about our responsibility to exercise this oversight, set conditions, if we think they're appropriate, that's a lot easier to say than to do.

I've just arrived at two general conclusions, Mr. Chairman. One, this is a train that's left the station, and stopping it will have consequences. How serious the consequences are is debatable. Trying to catch up and add more cars to the train, I'm not so sure what that does. And—to keep this ridiculous metaphor going—instructing the engineer which track to turn onto, because you expect that of them, that's also pretty hard. So, I guess what we'll do is, we'll, kind of, muddle through here. What I'm going to do is try to digest

and try to combine the advice we've gotten here, just to figure out what we do from here.

And, by the way, I apologize for not being here for your testimony. One of the few benefits of not being the chairman is that I was able to leave and go to a memorial service for Gaylord Nelson. I know you wanted to be there, Mr. Chairman. You couldn't do that. But I had the luxury of being able to meet that obligation and not be here. So, I apologize for not being here for your statements.

One additional complicating feature is the implications of India's emphasis upon breeder reactors for civil nuclear power production. Does that—because it gives a potential breakout capacity—does that complicate matters?

Mr. SOKOLSKI. Two comments. First, you get to legislate. You don't have to change the NPT. It's the Atomic Energy Act, which is your baby. You get direct referral. That's the reason why all—

Senator BIDEN. Well, no, I'm not suggesting we don't have the authority to do this.

Mr. SOKOLSKI. Oh, no, no, no.

Senator BIDEN. I'm not talking about that.

Mr. SOKOLSKI. No, no. You—if you do not do anything, and you let the administration—which, by the way, came here for a reason; they want you to change the law, or to do a Brownback amendment, maybe, where you, kind of, do a sleight of hand, which deflects the Atomic Energy Act in this one case. They need something from you. They will either get it, or they'll get something different. That is for sure. Those are your options. So, you're going to be forced to act, one way or the other, but there are consequences.

My hunch is this. The pace and importance of the nuclear and space portions of what is a much larger set of deals is something you can dictate; and you need to, with regard to the other cases that you're afraid be affected if you don't do the right thing. And the Atomic Energy Act is something the Nuclear Suppliers Group is watching—they're looking to see what this committee and the House committee and the Energy committees do. When they see you move forward, they'll move forward. And, by the way, I'd bet you'll move forward when you see them move forward. You're going to be watching one another.

So, you're very important. You're very important. And this deal, and its majority characteristics, will go forward, with or without the space and nuclear portion, immediately. I don't think you have to worry about that. They would like to get the space and nuclear deals done, but maybe they come later. You remember the Chinese experience. Thirteen years it took before they got their U.S. nuclear cooperative deal. Things didn't fall apart over that. And it was a good period of time to wait to get the Chinese to behave a little bit better.

Now, with regard to breeders, it is very important that you understand that their nuclear program—and that matter about breeder reactors is discussed in length in this paper—is one of the reasons why the nuclear energy program in India is so impractical even to help. They have to drop the breeder reactor thorium fuel-cycle approach that they've got if we're to even begin to help them dig their way out with any kind of expansion of nuclear power. And it will take a long time. That's the reason why this is the least le-

veraged of the things you can do to help their energy needs or to clean up their energy consumption. It's a very long and distant pole in the tent. And one of the reasons is the breeder reactor program.

Mr. CARTER. Senator, may I address your concerns?

I accept that the statement of the list of expectations that I named as a statement of American expectations, "By God, we expect it next year," would be inflammatory in Delhi. Still, in all, that really is what we're expecting of a strategic partnership from India. And I think it's fair, and in the spirit of the strategic partnership, for us to be clear about that. That's not the same as putting a ring in the nose of another nation or establishing benchmarks. But that is the American expectation, and, I think, phrased in that way, can and will be shared, over time—or at least that's the promise of this agreement. And I don't think you ought to be shy—or we ought to be shy, collectively—about saying that.

Second, there's another kind of death for this agreement that's not the death of the Congress deciding that this was a mistake and it's not going to play ball—which I do not recommend, and I know you were not stating that as your view, either—and that's the death of a thousand cuts. For us to get into a protracted negotiation with the Indians about the nuclear details of this is to recapitulate the whole problem of the relationship that this deal is supposed to transcend.

And so, I would say that the witnesses here—they've not confused me. These panelists, and those that have—I've read elsewhere, have been broadly consistent. There are a few things that the administration seems willing to add to its negotiation with the Indians, which will go a long way toward softening the downside of making this deal. They're very clear. And I think that, provided the Indians don't haggle over them, and we don't unnecessarily haggle over them, we can get through this. But for us to, again, look at this as a nuclear deal, and we put our nuclear doctors and they—but I say this with great respect as a physicist, myself—but put the two parties that have had the greatest difficulty surmounting the nuclear issue for 30 years in a room and ask them to work out the details, that's a formula for a death of a thousand cuts. And I think that we need to be cleaner than that.

You have before you some recommendations—there are several different flavors here, but they're all the same product—for clarifying and softening the downside of the nuclear exception, which is unquestionably being offered to India here. Let's pick one and move on.

Senator BIDEN. Thank you.

The CHAIRMAN. Gentlemen, we thank you very, very much for not only your testimony, but, likewise, for your good counsel, which we have been seeking, obviously, in these questions, because it is important that we act responsibly and in a timely manner. This is the purpose of the hearing, to gain insights from the administration as they're proceeding, but, likewise, to have the benefit of the views of each of you, as experienced veterans of the trail.

We thank you for your testimony and your responses to our questions. The hearing is adjourned.

[Whereupon, at 5:34 p.m., the hearing was adjourned.]

## ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

PREPARED STATEMENT OF SENATOR RUSSELL D. FEINGOLD, U.S. SENATOR FROM WISCONSIN

Mr. Chairman, today's hearing on potential United States-Indian nuclear energy cooperation and its security and nonproliferation implications is extremely important and I am pleased that this committee will be taking a close look at this complex issue today. I was troubled by the July 18, 2005, Joint Statement made by President Bush and Indian Prime Minister Singh that included a promise of increased nuclear cooperation. The President's promise will require Congress to take legislative action, changing laws and policies that are decades old and that are key to our national security. Did the President bother to consult with Congress before negotiating changes in U.S. legislation with a foreign country? The answer, unfortunately, is "No." In what has become a well-established pattern, this administration has acted unilaterally to reverse well-established policies, completely ignoring the elected representatives of the American people in the legislative branch.

In ignoring Congress and making a promise of increased nuclear cooperation, a promise he was not in a position to make, the President has put this committee and the Congress in a difficult position. He has raised great expectations within India, a nation of growing importance to the United States. If Congress is perceived as not living up to the President's promise, an effort to bolster United States-India relations could backfire badly. However, with an issue as important as nuclear cooperation, it would be irresponsible for Congress to endorse the President's proposal without taking a close look at it. The difficult position in which we find ourselves could have been entirely avoided, of course, if the President had simply respected the constitutional role of this body.

Mr. Chairman, it is our duty to thoroughly explore the broad implications of nuclear cooperation with India and carefully weigh our options before we change well-established national security policy. This hearing is a key first step. I look forward to today's testimony and to this committee's continued work on this important foreign policy matter.

---

STATEMENT OF STEPHEN G. RADEMAKER, ACTING ASSISTANT SECRETARY OF STATE FOR INTERNATIONAL SECURITY AND NONPROLIFERATION, STATE DEPARTMENT, WASHINGTON, DC, BEFORE THE NSG CONSULTATIVE GROUP, OCTOBER 18-19, 2005

Mr. Chairman, I'm pleased to be here to outline the United States proposal for civil nuclear cooperation with India and address any questions you may have. You have just heard Assistant Secretary Rocca place the initiative in the broader context of United States-India relations, including our dialog and cooperation on future energy resources. I would now like to take a few minutes to address more specifically the nonproliferation aspects of the initiative. For more detailed information on the initiative and on our proposed approach to the NSG you can reference the paper just distributed.

As Assistant Secretary Rocca has stated, the United States has worked to establish a strategic partnership with India that encourages India's continued emergence as a positive force on the world scene. An important component of this partnership is a landmark agreement with India to work toward full cooperation in the civil application of nuclear energy—while strengthening the nuclear nonproliferation regime. This includes our commitment to work with our other friends and allies to enable such cooperation.

Let me first say a word or two about what this initiative is not. It is not about nuclear weapons, and the United States has no intention to support India's weapons program. Neither do we intend to recognize India as a nuclear weapon state under the nuclear Nonproliferation Treaty, or renegotiate the treaty itself. Nor do we have any intention of undercutting the Nuclear Suppliers Group, an important nonproliferation policy tool. We view India as a special case, and have no plans to extend similar cooperation to other states.

Rather, the initiative calls for concrete steps by India that clearly further international nonproliferation goals—key nonproliferation commitments that will bring India for the first time into the mainstream of the international nuclear nonproliferation community. These include commitments to:

- Identify and separate civilian and military nuclear facilities and programs and file a declaration with the International Atomic Energy Agency (IAEA) regarding its civilian facilities;
- Place voluntarily its civilian nuclear facilities under IAEA safeguards;

- Sign and adhere to an Additional Protocol with respect to civilian nuclear facilities;
- Continue its unilateral moratorium on nuclear testing;
- Work with the United States for the conclusion of a multilateral Fissile Material Cut Off Treaty (FMCT) to halt production of fissile material for nuclear weapons;
- Refrain from the transfer of enrichment and reprocessing technologies to states that do not have them and support efforts to limit their spread; and
- Secure nuclear and missile materials and technologies through comprehensive export control legislation and adherence to the Missile Technology Control Regime (MTCR) and Nuclear Suppliers Group (NSG).

India's commitment to separate its civil and military facilities and place its civil facilities and activities under IAEA safeguards will help protect against diversion of nuclear material and technologies either to India's weapons program or to the weapons programs of other countries.

By adopting an Additional Protocol with the IAEA, India will commit to reporting to the IAEA on exports of all Trigger List items. This will help the IAEA track potential proliferation elsewhere.

By committing to adopt strong and effective export controls, including adherence to NSG and MTCR Guidelines, India will help ensure that its companies do not transfer sensitive weapons of mass destruction (WMD) and missile-related technologies to countries of concern.

By themselves, India's commitments are significant. Collectively, and when implemented, they will constitute a net gain for nonproliferation. Of course the initiative is not without challenges. India's separation of its civil and military facilities must be credible and defensible from a nonproliferation standpoint. It must strengthen the nuclear nonproliferation regime and provide strong assurances to supplier states and the IAEA that materials and equipment provided as part of civil nuclear cooperation will not be diverted for military purposes. And, of course, we intend to work with NSG partners to devise a strategy to permit such cooperation in ways that will not undermine the effectiveness of the NSG regime itself.

This is a challenging undertaking, but one that will, in the end, produce rewarding nonproliferation dividends. So, over the months ahead the United States looks forward to working with our partners in the Nuclear Suppliers Group to accomplish our objective. In our initial discussions, several states have indicated their agreement on the need to come to terms with India—a state which developed nuclear weapons outside the nonproliferation regime and which faces extraordinary energy needs ahead. We have already received several expressions of support for this effort to date, including by the Director General of the IAEA and states such as the United Kingdom, France, Australia, and Russia.

We believe that India's implementation of its commitments under this initiative will, on balance, enhance global nonproliferation efforts. The international nuclear nonproliferation regime will emerge stronger as a result. Obviously much depends on the progress that India makes. We continue to work with them to move the process forward.

Thank you.

---

LETTER TO SENATOR RICHARD G. LUGAR FROM ROBERT J. EINHORN

OCTOBER 28, 2005.

Hon. RICHARD G. LUGAR,  
*Chairman, Senate Foreign Relations Committee,*  
*Washington, DC.*

DEAR SENATOR LUGAR: I'm sorry that, because of a long-standing commitment to be in Moscow next week, I will not be able to attend the Nonproliferation PAG meeting or appear as a witness at the SFRC's hearing. I would nonetheless like to convey to you and members of the PAG my thoughts on the issues you will be discussing.

Please find below answers to the questions posed to us by Tom Moore. I am also attaching a one-page summary of my recommendations for modifying U.S. law and the Nuclear Suppliers Group guidelines as well as my prepared statement for a hearing held by the House International Relations Committee this past Wednesday, October 26. I would appreciate it if these papers could be circulated to PAG members.

*1. Why does civil nuclear cooperation weigh so heavily in U.S.-Indian relations?*

A key reason is the huge expansion of Indian energy needs in coming decades. Although the role that nuclear power can realistically play in meeting those needs

is exaggerated by India's influential nuclear lobby, it is clear that nuclear will be an increasing share of India's future energy mix. Moreover, given India's limited domestic supplies of natural uranium, its ability to import yellowcake—which it cannot do under current Nuclear Suppliers Group restrictions—has become a critical requirement if India's nuclear energy program is to expand.

But there is also a political reason why the nuclear issue weighs so heavily. Civilian nuclear cooperation with the United States and other NSG members has been the forbidden fruit that Indian political elites crave. More than anything else, U.S. willingness to set aside NPT-related rules to engage in nuclear cooperation with India has been sought by Indians as both a validation of their status as a nuclear weapon state and as a litmus test of the U.S. desire to transform the bilateral relationship.

### 2. *How does the Joint Statement address U.S. nonproliferation concerns?*

The United States has long urged India to align its policies and practices more closely with the international nonproliferation regime and, in general, to make its own contribution toward strengthening that regime. The Joint Statement brings India a few steps closer to the nonproliferation mainstream, but the benefits are limited.

Most of India's pledges in the Joint Statement are either reaffirmations of existing positions (to continue its unilateral moratorium on nuclear testing, strengthen its export control system, and work toward a fissile material cutoff treaty), codifications of current Indian practices (no transfers of enrichment or reprocessing technology to states without fuel-cycle facilities), or announcements of steps India had already agreed to take in the context of an earlier bilateral dialog on technology transfer and export control (adherence to the NSG and MTCR guidelines).

The genuinely new Indian commitment is the pledge to separate civilian and military nuclear facilities and to place civilian facilities under IAEA safeguards and the Additional Protocol. This has the symbolic value of helping reduce the perceived discrimination between countries that are obliged to accept safeguards on all their facilities and those that are not. But at this stage we don't know how complete will be the list of facilities India designates as civilian. And regardless of how inclusive or selective the list turns out to be, the pledge will not affect India's ability to continue producing fissile material for nuclear weapons at facilities not designated as eligible for safeguards. Without a halt to such production, the U.S.-India deal could facilitate an increase in India's stock of bomb-usable nuclear material (see my HIRC testimony).

In a serious omission, the July 18 agreement doesn't call on India to play a more active role in helping address today's most acute proliferation challenges, especially Iran. India's "yes" vote on the recent IAEA Board resolution that found Iran in non-compliance with its nonproliferation obligations was a welcome step. But since then, the Indians have tried to mollify the Iranians, saying that they actually oppose the finding of noncompliance and that they had voted for the resolution only because that was necessary to get the Europeans to back down from pursuing referral to the U.N. Security Council. The key test will be whether India makes a sustained and determined effort in the months ahead to persuade Iran to forgo its own enrichment capability and whether, if it becomes necessary, India votes yes to refer the question to the Security Council.

### 3. *What are the risks of the deal and how can they be minimized?*

Following are among the risks if the deal goes forward as it currently stands:

- By seeking an exception to the rules for India, the deal will make others less inhibited about engaging in risky nuclear cooperation with friends of their own—Iran in the case of Russia, Pakistan in the case of China.
- Bush administration initiatives in the NSG to tighten export controls will be harder to achieve if at the same time we're asking the Group to relax the rules for India.
- By sending the signal that the United States will eventually accommodate a decision to acquire nuclear weapons, the deal will reduce the perceived costs to states that might in the future consider going nuclear.
- It will make it more difficult to address proliferation challenges such as Iran. The Iranians have won some support internationally by asking publicly why 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.
- In general, the deal conveys the message that the United States now gives non-proliferation a back seat to other foreign policy goals—which will give others a

green light to assign a higher priority to commercial and political interests relative to nonproliferation.

Among the ways of minimizing these risks are the following recommendations:

- Require that India stop producing fissile materials for nuclear weapons, perhaps as part of a multilateral moratorium. This would bring India in line with the practices of the five original nuclear powers, all of whom have already stopped. A multilateral moratorium would help fight nuclear terrorism by capping stocks of bomb-grade material worldwide and thereby making those stocks easier to secure.
- Urge India to use its standing with Iran and the NAM to press Iran to give up its enrichment and other fuel-cycle capabilities.
- Preserve a semblance of the long-standing “NPT preference policy” by maintaining a distinction between India and NPT parties in terms of the nuclear exports they would be eligible to receive. Accordingly, U.S. law and NSG guidelines should be modified to permit nuclear exports to India *except* equipment, materials, or technology related to enrichment, reprocessing, and heavy water production. This would permit India to acquire uranium, enriched fuel, and nuclear reactors, but not items most closely related to a nuclear weapons program. Moreover, in keeping with U.S. NPT obligations and existing U.S. law, we should allow nuclear exports to India only to facilities that are under IAEA safeguards *in perpetuity*—not to facilities under voluntary safeguards arrangements that allow countries to withdraw materials or facilities from safeguards for national security reasons.
- Pursue changes to U.S. law and NSG guidelines in a *country-neutral* manner—not as a special exception to the rules for India alone. An India-specific approach heightens concerns that the United States is acting selectively and self-servingly on the basis of its own foreign policy interests rather than on the basis of nonproliferation performance. Modified U.S. law and NSG guidelines should therefore permit nuclear cooperation with *any* state not party to the NPT that meets certain criteria of responsible nuclear behavior. Such criteria can 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. (Suggested criteria are contained in the attached one-page paper.)

I hope these responses to Tom Moore’s questions and the attached papers can be of some assistance to you next week in your meetings on the U.S.-India nuclear deal.

Yours truly,

ROBERT EINHORN.

---

#### RECOMMENDED MODIFICATIONS OF U.S. LAW AND NSG GUIDELINES

Nuclear cooperation—except in the areas of enrichment, reprocessing, or heavy water production or with facilities not under IAEA safeguards in perpetuity—would be permitted with any state not party to the NPT as of January 2002\* that has demonstrated a strong commitment to nuclear nonproliferation and has a sustained, consistent record as a responsible nuclear power. Such a state will be considered a responsible nuclear power if it:

- Has provided public assurances that it will not test nuclear weapons;
- Is not producing fissile materials for nuclear weapons;
- 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;
- 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 sensitive nuclear materials and installations, both military and civilian, on its territory.

Under modified U.S. law, in order to make a nonparty to the NPT eligible to receive U.S. nuclear exports, the President would be required to certify that the prospective recipient had met these criteria. The criteria could also be adopted by the NSG as criteria for deciding, by consensus, whether a particular nonparty to the NPT should be eligible for nuclear transfers from NSG member states.

\*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 would be chosen to exclude North Korea and include only India, Pakistan, and Israel.

PREPARED STATEMENT OF HON. ROBERT J. EINHORN, SENIOR ADVISER, INTERNATIONAL SECURITY PROGRAM, CENTER FOR STRATEGIC AND INTERNATIONAL STUDIES, WASHINGTON, DC

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 United States-Indian relationship should not be pursued in a way that undermines a United States 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 18, 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 United States administration agreed to seek changes in United States 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 8, 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 18 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 18 Joint Statement as part of a United States-Indian dialog 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 colocation 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, United States 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 non-proliferation 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 countries 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 nonweapon 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 18 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.

#### DOWNSIDERS 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 United States-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 United States-India deal would make it harder to achieve key Bush administration nonproliferation initiatives. The United States 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 United States will be an uphill battle if they are also being asked to bend one of their cardinal rules (i.e., no nuclear trade with nonparties to the NPT) because it no longer suits the United States.

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 United States 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 United States 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 United States 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 non-proliferation.

The United States-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 United States is likely to react. Implementation of the deal would inevitably send the signal, especially to countries with good relations with Washington, that the United States will tolerate and eventually accommodate to a decision to acquire nuclear weapons.

In the near term, United States 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 predated 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 nonparty 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 18 Joint Statement, either by the Governments of India and the United States 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 United States-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 (United States, Russia, France, United Kingdom, 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 18 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 United States on the Iran nuclear issue would jeopardize congressional support for the legislative changes needed to implement the United States-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 24 joined the United States 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 non-compliance.

The risks of the nuclear deal could also be reduced by preserving some distinction between NPT parties and nonparties 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 nonparties 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 United States 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 United States 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 United States 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 nonparties 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 sensitive 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 nonparty 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 nonparties 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 nonparties 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 18 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 18. 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 nonparties has been locked as a matter of law and policy.

In its ardent desire to transform United States-Indian relations, the Bush administration has given too little weight to the damaging implications of its actions for the nonproliferation 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 United States to advance its strategic goals with India as well as its nonproliferation interests—not serve one at the expense of the other.

---

#### INDIA'S ICBM—ON A “GLIDE PATH” TO TROUBLE?

(A Policy Research Paper by Dr. Richard Speier, October 26, 2005)

##### 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 4 years of Bush administration negotiations the United States 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.<sup>1</sup>

Nearly 2 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. . . .<sup>2</sup>

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 decades.<sup>3</sup> The latest public report appeared less than 6 weeks after the Presidents’ joint statement.<sup>4</sup>

Over the last decade the reports have been consistent in averring 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, 2,000, and 3,000 kilometers.

India may have officially begun the Surya project (also sometimes known as Agni IV) in 1994.<sup>5</sup> 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.

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

Table 1 compares the Agni and Surya families of missiles.

TABLE 1.—THE AGNI AND SURYA MISSILE FAMILIES<sup>7</sup>

Missile	Size	Range	Mobile?	Probable Target
lx	(km) (m)			
Agni-1	15xl	700-1000+	yes	Pakistan
Agni-2	20xl	2000-3000+	yes	China
Agni-3	20xl or 13x1.8	3000-5000+	yes	China

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

<sup>2</sup> 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.

<sup>3</sup> 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.

<sup>4</sup> Madhuprasad, “Boost to Indian Armed Forces’ Deterrence Arsenal; India to Develop Intercontinental Ballistic Missile,” *Bangalore Deccan Herald in English*, August 25, 2005.

<sup>5</sup> Vivek Raghuvanshi, “Indian Scientists Poised To Test-Launch Country’s First ICBM,” *Defense News*, April 30, 2001, p. 26.

<sup>6</sup> International missile nomenclature defines an 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.—THE AGNI AND SURYA MISSILE FAMILIES<sup>7</sup>—Continued

Missile	Size	Range	Mobile?	Probable Target
Surya-1	35x2.8	-5000	no	China
Surya-2	40x2.8	8000-12000	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 technology for the SLV-3 and the PSLV from the United States in the 1960s.<sup>8</sup> 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 9 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 prelaunch 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.

- 5,000-kilometer Surya-1 might overlap the range of a reported 5,000-kilometer upgrade of the Agni missile.<sup>9</sup> 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.
- 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 United States."<sup>10</sup>
- A 20,000-kilometer range Surya-3 could strike any point on the surface of the Earth.

<sup>7</sup>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.

<sup>8</sup>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.

<sup>9</sup>Moscow Agentstvo Voenykh 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 Agri program.

<sup>10</sup>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

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.<sup>11</sup> 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 United States, the Soviet Union, the United Kingdom, 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.

- Early 1960s: NASA trains Indian scientists at Wallops Island, Virginia, in sounding rockets and provided Nike-Apache sounding rockets to India.<sup>12</sup> France, the UK, and the Soviet Union also supply sounding rockets.<sup>13</sup>
- 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.<sup>14</sup>
- 1965: Upon Kalam’s return to India the Indian Atomic Energy Commission requests U.S. assistance with the Scout, and NASA provides unclassified reports.<sup>15</sup>
- 1969–70: U.S. firms supply equipment for the Solid Propellant Space Booster Plant at Sriharokota.<sup>16</sup>
- 1973: India tests a “peaceful nuclear explosion.”
- 1970s: A.P.J. Abdul Kalam becomes head of the Indian Space Research Organisation (ISRO), in charge of developing space launch vehicles.
- 1980: India launches its first satellite with the SLV–3 rocket, a close copy of the NASA scout.<sup>17</sup>
- February 1982: Kalam becomes head of DRDO, in charge of adapting space launch vehicle technology to ballistic missiles.
- 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.<sup>18</sup>
- 1990: Russia agrees to supply India with cryogenic upper stage rockets and technology. The United States 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.
- 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.
- 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.
- 1998: India tests nuclear weapons after decades of protesting that its nuclear program was exclusively peaceful.

<sup>11</sup> For example, Brahma Chellaney, “Value of Power,” *The Hindustan Times* in English, May 19, 1999.

<sup>12</sup> Vadlamudi, *op cit.*

<sup>13</sup> Milhollin, *op cit.*

<sup>14</sup> *Ibid.*

<sup>15</sup> *Ibid.*

<sup>16</sup> Vadlamudi, *op cit.*

<sup>17</sup> Alexander Pikayev, Leonard Spector, et al., *Russia, the U.S. and the Missile Technology Control Regime*, Adelphi Paper 317, International Institute for Strategic Studies, March 1998.

<sup>18</sup> 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](http://www.thebulletin.org/article_nn.php?art_ofn=so05norris).

- 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.<sup>19</sup>
- 1999: Defense News cites Indian Defence Research and Development Organisation (DRDO) officials as stating that the Surya is under development.<sup>20</sup>
- 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.”<sup>21</sup>
- November 23, 1999: Rawat is reported to have been stripped of his portfolio after his ICBM disclosure.<sup>22</sup>
- 2001: Khrunichev State Space Science and Production Center announces that it will supply five more cryogenic upper stages to India within the next 3 years.<sup>23</sup>
- 2001: The cryogenic engine is reported to be “the Surya’s test-bed.”<sup>24</sup>
- 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.”<sup>25</sup>
- 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.<sup>26</sup>
- 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 2½ to 3½ metric ton payload with two or three warheads with explosive yields of 15 to 20 kilotons.<sup>27</sup>

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 United States 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:

- 1970s: The United States begins to consider a broad policy against missile proliferation.<sup>28</sup>
- 1980s: The United States and its six economic summit partners secretly negotiate the Missile Technology Control Regime (MTCR). After 1½ 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.<sup>29</sup>
- 1990: Two weeks after the United States 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.<sup>30</sup>

<sup>19</sup> 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.

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

<sup>21</sup> Canadian Security Intelligence Service, “Ballistic Missile Proliferation,” Report # 2000/09, March 23, 2001, available at [http://www.cisiscrs.gc.ca/eng/misdocs/200009\\_e.html](http://www.cisiscrs.gc.ca/eng/misdocs/200009_e.html).

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

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

<sup>24</sup> Cf. footnote 6.

<sup>25</sup> 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](http://www.cia.gov/nic/special_missilethreat2001.html).

<sup>26</sup> Cf. footnote 9.

<sup>27</sup> Madhuprasad, op cit.

<sup>28</sup> 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.

<sup>29</sup> Speier, *ibid*.

<sup>30</sup> Pikayev, et al, op cit.

- 1993: The United States and Russia agree that Russia may transfer a limited number of cryogenic rocket engines to India, but not their production technology.<sup>31</sup>
- 1998: India tests nuclear weapons. United States imposes broad sanctions on nuclear and missile/space-related transfers.
- 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 to devalue missiles by selling the technology to many nations and break their stranglehold.”<sup>32</sup>
- September 22, 2001: United States lifts many of the technology sanctions imposed in 1998. Subsequently, India’s Prime Minister visits the United States amid agreement to broaden the technology dialogue.<sup>33</sup>
- 2002: Kalam becomes President of India.
- 2002: The United States tells India it will not object to India launching foreign satellites, as long as they do not contain U.S.-origin components.<sup>34</sup>
- 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 deletes descriptions of India’s activities.<sup>35</sup>
- October 2003: Secretary of State Powell speaks to the Washington Post about the “Trinity” and the “glide path.”<sup>36</sup>
- 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.”<sup>37</sup>
- 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.”<sup>38</sup>

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 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:

- An incentive to preempt against India in times of crisis,
- A diversion of India’s military funds away from applications that would more readily complement “strategic partnership” with the United States,
- Increased tensions and dangers with China,
- Confusion and anger on the part of India’s friends in Europe and the United States,
- A backlash against India that will hinder further cooperation in a number of areas, and
- 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

<sup>31</sup> Ibid.

<sup>32</sup> “Agni IRBM Built to Carry Nuclear Warhead,” *Jane’s Defence Weekly*, April 28, 1999.

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

<sup>34</sup> C. Raja Mohan, “U.S. Gives Space to ISRO,” *The Hindu in English*, September 30, 2002, p. 11.

<sup>35</sup> 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>.

<sup>36</sup> Cf. footnote 2.

<sup>37</sup> 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>.

<sup>38</sup> Cf. footnote 3.

cooperation, is flirting with counterproductive activities that could lead to more proliferation.

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

- Strategic cooperation with India is of greater value than theological concerns about proliferation.
- India has already developed nuclear weapons and long-range missiles, so resistance to such proliferation is futile.
- 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:

- 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 United States.
- 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.<sup>39</sup>
- 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.<sup>40</sup>
- 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 United States 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 United States 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 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 United States, 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 United States 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

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

<sup>40</sup>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/>.

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.<sup>41</sup> 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 United States. After India’s 1998 nuclear weapon tests, the United States imposed sanctions and then gradually lifted them. In nuclear and rocket matters, this was not enough for India. And once the United States began easing up on India, the United States kept easing up.

The United States 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 United States to provide launch services for Indian satellites. It is another thing for the United States 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 United States 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 United States 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 United States 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 United States also 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 United States 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 United States 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 No. 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 United States should explicitly or de facto place ISRO back on the “entities” list of destinations that require export licenses.<sup>42</sup> Certainly, Congress should insist that the United States explain its “red lines” regarding space cooperation with India. If these lines are not drawn tightly enough, Congress should intervene.

<sup>41</sup> Richard Speier, “United States Strategies Against the Proliferation of Mass Destruction Weapons,” doctoral dissertation, Massachusetts Institute of Technology, 1968.

<sup>42</sup> 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.

*(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 United States should review its satellite cooperation to ensure that it does not 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 United States 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.

## FEEDING THE NUCLEAR FIRE

(From *Foreign Policy in Focus*, by Zia Mian and M.V. Ramona, Sept. 20, 2005)

The July 18 Joint Statement by U.S. President George Bush and Prime Minister Manmohan Singh has attracted a great deal of comment. The focus has been on the possible consequences of United States promises to support India's nuclear energy program in exchange for India clearly separating its military and civilian nuclear facilities and programs and opening the latter to international inspection.

Much of the debate on the deal has arisen between what can be broadly called nuclear hawks and nuclear nationalists. The hawks believe that New Delhi's nuclear program is a great success and that India is more than able to take care of itself. They see the deal as imposing unnecessary constraints on India's nuclear program and impeding the creation of a large nuclear arsenal—including thermo-nuclear weapons (hydrogen bombs)—which they believe to be essential for India to achieve “great power” status.

The clearest expression of this perspective comes from former Prime Minister Atal Behari Vajpayee and the Bharatiya Janata Party (BJP), who seek the largest possible nuclear weapons capability. Vajpayee argues that: “Separating the civilian from the military would be very difficult, if not impossible . . . It will also deny us any flexibility in determining the size of our nuclear deterrent.” When he refers to “flexibility” in determining the size of the Indian nuclear arsenal, he does not include reducing or eliminating it. Rather, his term expresses the fear that separating civil and military facilities may curb the arsenal's size.

Nuclear nationalists have a less ambitious, more traditional perspective that considers India's nuclear program a great national technological achievement and necessary for India's economic and social development. They see the deal as offering a way to sustain and expand the nuclear energy program without unduly restricting a “minimum” nuclear weapons arsenal.

The current government has embraced this nationalist view, as have many defenders of the deal. The Prime Minister laid it out most clearly to Parliament on July 29, saying: “Our nuclear program . . . is unique. It encompasses the complete range of activities that characterize an advanced nuclear power . . . our scientists have done excellent work, and we are progressing well on this program as per the original vision outlined by Pandit Jawaharlal Nehru and Dr. Homi Bhabha.” Singh went on to argue that “nuclear power has to play an increasing role in our electricity generation plans,” and he noted that the deal is flexible because “our indigenous nuclear power program based on domestic resources and national technological capabilities would continue to grow.” The expected international support, both in nuclear fuel and nuclear reactors, will help “enhance nuclear power production rapidly,” he added. At the same time, he made it clear that “there is nothing in the Joint Statement that amounts to limiting or inhibiting our strategic nuclear weapons program.”

These two positions have by and large dominated the debate so far. There are many problems with both views. The first is their shared belief in the success of India's nuclear energy program and the need to continue with and expand this effort. They fail to recognize that the deal is actually a testament to the long-standing, expensive, and large-scale failure of the Department of Atomic Energy (DAE) to safeguard health, safety, the environment, and local democracy.

Both camps also contend that nuclear weapons are a source of security, though this conviction has been extensively debunked. Those who persist in this belief also

ignore the essential moral, legal, and criminal questions of what it means to have—and be prepared to use—nuclear weapons. The only differences between the two camps are in the character and size of the genocidal weapons they desire and in the number of people they are prepared to threaten to kill.

#### A HISTORY OF FAILURE

The establishment of the Atomic Energy Commission (AEC) in 1948 was framed by the rhetoric of indigenous national development. Led by Homi Bhabha, the AEC portrayed India as forging its own path in the new nuclear age. That was not to be. There was no progress until the United Kingdom offered the design details and enriched uranium fuel for the first Indian nuclear reactor, Apsara. In what was to become a pattern, the official announcement when the Apsara reactor went critical declared the landmark a “purely indigenous affair.”

Similarly, the CIRUS reactor, which provided the plutonium used in the 1974 nuclear test (and quite likely some used in the 1998 tests as well), was supplied by Canada, and the heavy water used in it came from the United States. An American firm, Vitro International, was awarded the contract to prepare blueprints for the first reprocessing plant at Trombay. The first power reactors at Tarapur and Rawatbhata were supplied by the United States and Canada respectively. And foreign collaboration did not just extend to reactors. Many of India’s nuclear scientists were schooled in America and elsewhere. Between 1955 and 1974, over 1,100 Indian scientists were sent to train at various United States facilities.

Extensive foreign support of the nuclear program ended only after the 1974 nuclear test. The international community led by Canada and the United States—both of whom were incensed by India’s use of plutonium from the CIRUS reactor, which had been given purely for peaceful purposes—cut off most material transfers relating to New Delhi’s nuclear program. However, India’s nuclear facilities surreptitiously procured components from abroad, and foreign consultants continued to be hired for projects. Moreover, DAE personnel still had access to nuclear literature and participated in international conferences where technical details were freely discussed.

Even with all this help, DAE’s failures were many and stark. In 1962, Homi Bhabha predicted that by 1987 nuclear energy would constitute 20,000 to 25,000 megawatts (MW) of installed electricity generation capacity. His successor as head of the DAE, Vikram Sarabhai, predicted that by 2000 there would be 43,500 MW of nuclear power. In 1984, the “Nuclear Power Profile” drawn up by the DAE suggested the more modest goal of 10,000 MW by 2000, India never came close to meeting any of these goals.

After over 50 years of generous government funding, nuclear power amounts to only 3,400 MW, barely 3 percent of India’s installed electricity capacity. This capacity is expected to rise by nearly 50 percent over the next few years but not because of the DAE. The largest component of the expansion will be two 1,000 MW reactors purchased from and being built by Russia.

This history of failure explains the escalating demands from the DAE and other nuclear advocates to gain access to international nuclear markets. Only with international help can the DAE ever hope to achieve its latest promised goal of 20,000 MW by the year 2020.

Another pressure driving the deal with Washington has been the DAE’s failure to manage its existing nuclear program. In its determination to build more and more reactors—something to show for all the money that it gets—the DAE has failed to provide reactor fuel. Soon after the United States-India deal was announced, this oversight became apparent in a statement from an unnamed official to the British Broadcasting Corporation who admitted: “The truth is we were desperate. We have nuclear fuel to last only till [sic] the end of 2006. If this agreement had not come through we might have as well closed down our nuclear reactors and by extension our nuclear program.” The former head of the atomic energy regulatory board has reported that this is not a new problem, he notes that “uranium shortage” has been “a major problem for the officials of NPCIL and the Nuclear Fuel Complex (NFC) for some time.”

The issue is simple. Apart from Tarapur I and II, all DAE reactors are fueled using uranium from the Jaduguda region of Jharkand. The total electric capacity of the heavy water-based power reactors is 2,450 MW. At 75 percent operating capacity, they require nearly 330 tons of uranium every year. The reactors that are supposedly dedicated to making plutonium for nuclear weapons, CIRUS and Dhruva, consume perhaps another 30–35 tons. When mining started in Jaduguda, the average ore grade was about 0.067 percent. Now it is reportedly less than half that. The current mining capacity is around 2,800 tons of uranium ore per day. This

means the DAE may only be producing about 300 tons of uranium a year, which falls well short of the fueling requirements. The DAE has been able to continue to operate its reactors only by using stockpiled uranium from earlier days when nuclear capacity was much smaller. This stockpile should be exhausted by 2007.

The DAE has been desperately trying to open new uranium mines in India, but it has been met with stiff public resistance everywhere. This local resistance stems from the widely documented negative impacts of uranium mining and milling on public and occupational health.

The limits on domestic uranium reserves have been known since the nuclear program was started. This concern was the justification for the three-phase nuclear power program that Bhabha originally proposed and that continues to be pursued. This program involves separating plutonium from the spent fuel produced in natural uranium reactors and setting up breeder reactors, which in turn could theoretically be used to utilize India's thorium resources for energy production. But the three phases are far from being realized. The DAE has failed to build and sustain enough natural uranium-fueled reactors for the first phase. The second phase is still experimental, and the first plutonium-fueled power reactor has yet to be completed. Even if it becomes fully functional, breeder reactors are unlikely to be a significant source of electricity for several decades. The thorium fuel cycle, the third phase, is still far in the future.

#### IMPLICATIONS OF THE AGREEMENT FOR NUCLEAR ENERGY IN INDIA

If the deal with Washington goes through, the DAE will be free to purchase uranium from the international market for its safeguarded reactors. This has some important consequences. For starters, it will reduce pressure on domestic uranium reserves. Since imported uranium will be much cheaper than Indian uranium, it may also marginally reduce the operating costs of Indian nuclear plants. Although the DAE hides its actual costs, there is little doubt that nuclear electricity is more expensive than other major sources of power in India.

At the same time, access to cheap, imported uranium will remove what has been the DAE's primary justification for much of its long-term nuclear plan. For decades, the DAE has cited a shortage of domestic uranium as justification for India's breeder program, even though poor economics and countless engineering problems have effectively killed similar breeder reactor programs in the United States, France, and Germany. The high cost of breeder reactors stems from their need for plutonium fuel produced at reprocessing plants by chemically treating spent (i.e., used) nuclear fuel from ordinary reactors. The separated plutonium is then fashioned into breeder fuel at special and costly fabrication plants. There are enormous economic costs, environmental repercussions, and public health risks associated with this whole scheme.

If cheap uranium becomes available to India, there will be no need for any of this. Even so, the DAE may balk at giving up its breeder reactor program. It may instead choose to emulate Japan, which imports uranium to power its nuclear reactors and, ignoring the costs and risks, continues to pursue its breeder reactor program. If so, the DAE's institutional interests will have once again triumphed over economic good sense and concerns about health and the environment.

India's existing nuclear capacity—and any increases in it, domestic or foreign, that the United States deal facilitates—should not to be considered a benefit. Nuclear electricity is expensive, and it would be far better to invest in other, cheaper sources of power as well as energy conservation measures. There are also important safety concerns associated with nuclear power. At least one of the DAE's nuclear reactors has come close to a major accident. One can barely imagine the consequences of a Chernobyl-like meltdown involving the release of large quantities of radioactive materials at a reactor in a densely populated country like India. Other facilities associated with the nuclear fuel cycle have also experienced accidents, though these have primarily affected workers within the plant.

Apart from extreme accidents, there are many environmental and public health consequences associated with the many facilities that make up India's nuclear complex. A scientific study of the health consequences on the local population around the Rajasthan Atomic Power Station (RAPS) located at Rawatbhata near Kota observed statistically significant increases in the rates of congenital deformities, spontaneous abortions, stillbirths and 1-day deaths of newborn babies, and solid tumors.

And, to cap it all, there is the unsolved problem of managing large amounts of radioactive waste for many tens of thousands of years. The question that really needs to be discussed (but has hardly figured in the debate) is whether India needs any nuclear power plants at all. There are many who believe India would be better

off giving up this costly and dangerous technology and finding ways to meet the needs of its people without threatening their future or their environment.

#### HOW MANY BOMBS ARE ENOUGH?

Nuclear energy and nuclear weapons have been linked from the beginning, and this will continue under the deal with Washington. Access to the international uranium market for fueling reactors will free up domestic uranium for India's weapons program and will likely boost New Delhi's nuclear clout.

There are several ways in which India could use its freed-up domestic uranium. It could choose to build a third reactor dedicated to making plutonium for nuclear weapons. There have been proposals for a larger reactor to add to CIRUS and Dhruva at the Bhabha Atomic Research center in Mumbai. India could also start to make highly enriched uranium for nuclear weapons. Pakistan has used such highly enriched uranium, produced at Kahuta, for its weapons. Both paths, which need not be exclusive, would allow India to increase its fissile materials stockpile at a much faster rate. A third use for domestic uranium would be in supplying the fuel for a nuclear submarine that has been under development since the 1970s. Modest uranium availability and the more-pressing need to keep the power reactors running have restricted all such plans in the past.

If the proposed agreement is solidified, India could use both its current stockpile of weapons-grade plutonium and all future production to make nuclear weapons. The current stockpile is estimated to be perhaps 400–500 kg, sufficient for about 100 simple fission weapons. (It is usually assumed that 5 kg is needed for a simple weapon. More sophisticated designs typically require less plutonium.) CIRUS and Dhruva produce about 25–35 kg of plutonium a year. This means that by 2010 India's potential arsenal size could be about 130 warheads using only existing facilities.

But there are other sources of weapons-grade fissile material. Power reactors can be used to make weapons-grade plutonium by limiting the time the fuel is irradiated. Run this way, a typical 220 MW power reactor could produce between 150–200 kg/year of weapons-grade plutonium when operated at 60–80 percent capacity.

Another source of fissile material is the stockpile of plutonium in the spent fuel of power reactors. Though it has a slightly different mix of isotopes from weapons-grade plutonium, it can be used to make a nuclear explosive. The United States conducted a nuclear test in 1962 using plutonium that was not weapons-grade. One of India's May 1998 nuclear tests is also reported to have involved such material.

Over the years, some 8,000 kg of reactor-grade plutonium may have been produced in the power reactors not under safeguards. Only about 8 kg of such plutonium are needed to make a simple nuclear weapon. Unless this spent fuel is not put under safeguards—i.e., declared to be off-limits for military purposes, as part of the deal—India would have enough plutonium from this source alone for an arsenal of about 1,000 weapons, larger than that of all the nuclear weapons states except the United States and Russia.

Lastly, there is the plutonium produced in Kalpakkam in India's small, fast-breeder test reactor (FBTR). Even more plutonium will be produced by the 500 MW prototype FBTR now under construction. It is curious that ever since the 1960s, the DAE has resisted placing India's breeder program under international safeguards, even though both Germany and Japan, neither of them nuclear weapon states, subjected their breeder reactor programs to such safeguards. In theory, international scrutiny prevents plutonium or uranium from civil nuclear facilities from being used to make nuclear weapons. The DAE's resistance to safeguards begs the question as to whether the breeder program is, or ever was, only for civilian purposes.

A.N. Prasad, former director of the Bhabha Atomic Research Centre (BARC), has argued that these large stocks of weapons-usable material are beside the point. Prasad asserts that the deal with Washington should be rejected because "our military activities are not aimed at stockpiling nuclear weapons," since the weapons become old, their materials degrade, [and] they have to be dismantled and replaced.

But Prasad is disingenuous. It is estimated that the plutonium used in U.S. nuclear weapons may not need to be replaced for 45–60 years. The material can then be recycled into new nuclear weapons. Moreover, many of the aging effects that plutonium experiences can be avoided with proper storage, allowing existing stocks of plutonium to last indefinitely. All other nuclear weapons states have stopped producing new material for their nuclear weapons programs—only India, Pakistan, and Israel appear to be producing new weapons ingredients.

Another nuclear weapons resource is tritium, a gas used to boost the yield of fission weapons. The DAE claims to have tested a tritium-boosted weapon in 1998. However, tritium decays relatively quickly (its half-life is just over 12 years). Thus,

to maintain a stockpile of tritium for a long time requires either a very large initial amount or production at a rate that balances decay. Tritium is a byproduct in nuclear reactors dedicated to producing plutonium for weapons. These reactors can also be used specifically to generate more tritium.

In short, the deal with Washington promises not only to leave New Delhi's weapons capability intact but to allow for a rapid and large expansion of India's nuclear arsenal. And both parties to the pact accept this as a good thing.

The effects of the use of both the smaller yield fission weapons and the more destructive thermonuclear weapons in India's arsenal are well-known. Put simply, the smaller weapons will kill almost everyone within 1.5 km of the explosion, and the larger weapons will kill most people out to distances of 3.5 km. The effects of radioactive fallout would spread tens of kilometers further. Either kind of bomb would be enough to destroy a modern city. The question that needs to be asked is, "How many cities do India's leaders wish to be able to destroy?"

There are many who believe that no country should have nuclear weapons, since such weapons engender fear through the threat of genocide. In the 60 years since Hiroshima, we all should have learned that there is no security to be found in the threat to kill millions.

#### CONCLUSION

The nuclear agreement between the United States and India has many problems and raises two fundamental questions. The first is whether India needs nuclear energy for its development and the well-being of its people. A good case can be made that it does not.

The second question is whether India needs nuclear weapons if it truly wants to live in peace with its neighbors and with the world. Many believe, with good reason, that it does not.

The outcome of the proposed nuclear agreement, therefore, is a future in which a nuclear-powered and nuclear-armed India swaggers along in Washington's shadow. Such a choice could not be more stark.

---

#### RESPONSES OF SECRETARIES NICHOLAS BURNS AND ROBERT JOSEPH TO QUESTIONS SUBMITTED BY SENATOR LUGAR

##### *The Administration's Legislative Proposal and the July 18 Joint Statement*

*Question.* When will the administration present this committee with legislation regarding nuclear energy cooperation with India?

*Answer.* We do not intend to ask Congress to take legislative action to facilitate this agreement until the Indian Government takes certain important steps. We have made it clear to the Indians that they need to begin to follow through on their commitments, including to present—and begin to implement—a credible and transparent plan for separation of their civilian and military nuclear facilities that is defensible from a nonproliferation standpoint before we would further seek to adjust our legal frameworks.

We have agreed to work closely with the Indians over the next several weeks to months on this plan and on other Indian steps which will allow us to seek changes to our laws. We hope to be in a position to seek formal legislative relief in the first quarter of 2006.

*Question.* When do you anticipate that India will have completed all of the steps it has committed to undertaking in the July 18, 2005, Joint Statement?

*Answer.* Some of the actions to which India has committed are ongoing, such as its pledge to continue its moratorium on nuclear testing and its commitment to refrain from the transfer of enrichment and reprocessing technologies to states that do not already have them. Others can be completed with additional effort, such as India's adherence to the Nuclear Suppliers Group and the Missile Technology Control Regime. Some of the actions that India must take are complex, and will take time to complete. There is not yet an established timetable for the separation of India's civil and military nuclear infrastructure, for instance. Implementation of the plan will, as the Joint Statement suggests, take place in a phased manner. We intend to move expeditiously and will assess progress on all aspects of the Joint Statement prior to President Bush's expected trip to India in early 2006. We hope that India will have developed and begun to implement a plan for civil-military separation and also be engaged in substantive discussions with the IAEA by that time.

*Question.* In your view, when should Congress act to change U.S. law? Before or after completion by India of all its undertakings in the July 18 Joint Statement or after the completion of certain parts of the Joint Statement?

*Answer.* Because the Joint Statement will take considerable time to implement fully, we do not intend to wait until all Indian commitments are fully realized to submit proposed legislation to the Congress. Rather, once India develops a transparent and credible civil-military separation plan for its nuclear facilities and programs and begins to implement it, we will then seek appropriate legislative solutions. Ideally, U.S. law would be properly adjusted before the Nuclear Supplies Group Guidelines are adjusted.

*Question.* What are the interim forms of legislation being considered by the Department in this area? Will there be a new nuclear cooperative agreement with India, one for which statutory amendments would be required, or does the administration prefer to create a broad, new authority outside of the current Atomic Energy Act of 1954 (42 U.S.C. 2011, et seq.) for India?

*Answer.* In consultation with Congress, our objective is to conclude a new agreement for peaceful nuclear cooperation with India that satisfies all requirements of section 123(a) of the Atomic Energy Act, except for the requirement that full-scope IAEA safeguards be applied in India. India has agreed to separate its military and civilian nuclear facilities and programs, and to place its civilian components under IAEA safeguards. The result will not be “full-scope” IAEA safeguards, so the agreement for peaceful nuclear cooperation will not provide for that; but the agreement will allow for appropriate controls to help ensure that material or goods provided for civilian purposes remain within the civilian sector. The administration prefers stand-alone, India-specific legislation, but could envision alternatives as well. We look forward to continuing consultations with both the Senate and the House in the coming weeks.

*Question.* Could you please provide me with your understanding of current U.S. law, i.e., which U.S. laws or regulations prohibit exports to India of nuclear and dual-use nuclear items and which U.S. laws or regulations provide a presumption (of approval or denial) of such exports to India, and which such laws and regulations would need to be modified to implement the Joint Statement?

*Answer.* Under Section 123 of the Atomic Energy Act (AEA) of 1954, as amended, an agreement for cooperation between the United States and India will be required in order for the United States to engage in major nuclear cooperation (e.g., nuclear material, nuclear facilities, and major nuclear components) with India as contemplated by the Joint Statement. One of the requirements is that an agreement for cooperation (outside of the NPT-recognized five nuclear weapon states) must include full-scope safeguards unless exempted by the President as provided in section 123. An agreement that has been exempted by the President from one or more requirements in section 123(a) cannot become effective until Congress adopts, and there is enacted, a joint resolution stating that Congress favors the agreement. We believe stand-alone legislation offers a preferable long-term solution.

Section 128 of the AEA requires, as one of the export license criteria for significant nuclear exports, that a recipient nonnuclear weapon state have full-scope safeguards. The AEA’s full-scope safeguards requirement is incorporated in the regulations of the Nuclear Regulatory Commission at 10 CFR § 110.42(a)(6), as one of the export licensing criteria for exports of nuclear facilities and material. Section 129 of the AEA prohibits significant nuclear cooperation with a nonnuclear weapon state that is found by the President to have undertaken certain activities, including detonating a nuclear explosive device, or to have engaged “in activities involving source or special nuclear material and having direct significance for the manufacture or acquisition of nuclear explosive devices, and has failed to take steps which, in the President’s judgment, represent sufficient progress toward terminating such activities.” The Nuclear Regulatory Commission’s regulations at 10 CFR § 110.46 incorporate section 129 of the AEA. Both section 128 and section 129 provide Presidential waiver authority.

With respect to dual use nuclear items under the Export Administration Regulations (EAR), there would be no need to make a regulatory change. Dual-use items are reviewed on a case-by-case basis. As a matter of policy, Commerce does not approve exports to unsafeguarded facilities. Moreover, the United States remains committed to not “in any way” assist weapons programs in nonnuclear weapon states as defined by the NPT.

*Question.* The Joint Statement commits the United States to “full civil nuclear energy cooperation with India.” As the United States has different forms of nuclear energy cooperation with many nations, differing even among NPT Parties, what is

the meaning of this phrase in relation to U.S. law and regulation regarding nuclear commerce with India?

Answer. For the United States, “full civil nuclear cooperation” with India means trade in most civil nuclear technologies, including fuel and reactors. But we do not intend to provide enrichment or reprocessing technology to India. As the President said in February 2004, “enrichment and reprocessing are not necessary for nations seeking to harness nuclear energy for peaceful purposes.” We do not currently provide enrichment or reprocessing equipment to any country.

We will also need to ensure that any cooperation is fully consistent with U.S. obligations under the NPT not to “in any way” assist India’s nuclear weapons program, and with provisions of U.S. law.

*Question.* What regulatory changes (beyond those already made under the Next Steps in Strategic Partnership or NSSP) would need to be made to implement full civil nuclear energy cooperation with India?

Answer. Many of the specifics of required regulatory changes to implement full civil nuclear energy cooperation with India have yet to be determined by the administration. U.S. regulations that incorporate or reflect statutory language will need to be modified or waived in order to permit civil nuclear cooperation consistent with the Joint Statement, and will need to be addressed along with modification or waiver of the related statute. No Department of Commerce regulatory changes will be required in order to implement full civil nuclear cooperation, except as facilities are put under IAEA safeguards, they could in principle be removed from the Entity List.

*Question.* Presuming Congressional approval of statutory amendments and Nuclear Suppliers Group approval of an exception to its Guidelines for India, when would the United States Government begin to approve the export of nuclear items or technical data to India, and what are those items or technical data likely to be?

Answer. Should the NSG and the Congress approve, in principle, supply would be feasible when the United States and other potential suppliers assess they can confidently supply to Indian facilities and remain in compliance with our obligations under the NPT and NSG. This will occur once IAEA safeguards are put in place and applied in perpetuity. Further, the separation plan must ensure—and the safeguards must confirm—that cooperation does not “in any way assist” in the development or production of nuclear weapons. In this context, nuclear materials in the civil sector must remain within the civil sector. A clear and transparent separation between India’s civil and military facilities is essential. We will be unable to supply facilities that are not under appropriate safeguards.

We cannot say precisely which nuclear technologies the United States (or other suppliers) would export to India, except that we would exclude reprocessing and enrichment technologies from our list. In our view, once India makes demonstrable progress in implementing key Joint Statement commitments—with the presentation of a credible, transparent, and defensible separation plan foremost on the list—we will be ready to engage with our NSG partners in developing a formal proposal to allow the shipment of Trigger List items and related technology to properly safeguarded facilities in India.

#### *Nuclear Suppliers Group Issues*

*Question.* What are the positions of each of the 44 members of the Nuclear Suppliers Group on the comments and proposals made by A/S Rocca and A/S Rademaker during their consultations with NSG members in Vienna, Austria, last October?

Answer. Not every member of the Nuclear Suppliers Group expressed an opinion on the comments made by A/S Rocca and A/S Rademaker during their consultations with NSG Participants at the Consultative Group meeting in October. The meeting provided many NSG partners the first opportunity to consider our proposed approach to realizing full civil nuclear cooperation without amending the NSG Guidelines, per se.

Of those delegations expressing an opinion, some governments, including the Czech Republic, France, Russia, and the U.K., expressed support for the proposal; several governments, including Argentina, China, Greece, Japan, and South Korea, said that their governments would require further information on implementation, including details of India’s plans for the separation of civilian and military nuclear facilities, before they could make a decision on the proposals; and some governments, such as Sweden and Switzerland, expressed initial reservations and indicated a need for further study.

*Question.* Could you please furnish the remarks made by Assistant Secretary Rocca and Assistant Secretary Rademaker in Vienna to the NSG members to the committee?

*Answer.* Yes. To satisfy standard NSG confidentiality practices, Assistant Secretary Rocca's and Assistant Secretary Rademaker's statements are reproduced below. These are not intended for open publication.

*Question.* Did the remarks made by the U.S. delegation present specific proposals regarding changes to specific parts of the NSG Guidelines for Nuclear Exports for India?

*Answer.* We have not yet tabled any formal proposals. We expressed a preference at the October meeting of the NSG Consultative Group to treat India as an exceptional case in light of its substantial and growing energy needs, its nuclear nonproliferation record, and the enhanced nonproliferation commitments it has now undertaken. We also expressed our firm intention that the NSG maintain its effectiveness, and emphasized that we will not undercut this important nonproliferation policy tool. The U.S. proposal neither seeks to alter the decisionmaking procedures of the NSG nor amend the current full-scope safeguards requirement in the NSG Guidelines.

*Question.* Has the United States shown proposed changes to NSG Guidelines to Indian Government officials?

*Answer.* No. Our discussions with India to date have centered on implementation of Indian and U.S. commitments rather than on what the NSG should do.

*Question.* Will India join the NSG?

*Answer.* In the 18 July Joint Statement, PM Singh committed India not to join but to adhere to Nuclear Suppliers Group (NSG) and Missile Technology Control Regime (MTCR) Guidelines. The practice of unilateral adherence to the MTCR or NSG is not unique to India. Unilateral adherents voluntarily abide by the Guidelines of the regime—as do regime members—but are not formal members, *per se*. We expect to hold unilateral adherents, such as India, to the same standards specified in the Guidelines.

*Question.* Do you anticipate that the NSG will be able to make a consensus decision on the U.S. proposal(s) regarding India at its next plenary meeting?

*Answer.* While we will certainly consider advancing a formal proposal for NSG consideration at the next plenary, the pace and scope of India's implementation will help determine the specific timing. Should its actions, and our ongoing consultations with NSG partners support it, we may be in a position to seek agreement on a formal proposal at the 2006 plenary session, expected in the May/June timeframe.

#### *INPA Sanctions*

*Question.* On September 23, 2004, the administration sanctioned two Indian scientists for their activities in Iran under the authority of the Iran Nonproliferation Act of 2000 (P.L. 106-178, or INPA).

- Has the administration considered other sanctions against Indian entities or persons under INPA or any other relevant U.S. law or executive order since last September?

*Answer.* While we believe India has a solid record overall of ensuring that its nuclear-related expertise and technologies do not pose a proliferation risk, we continue to review information and take action to implement U.S. law as appropriate. In an unclassified response, it would not be appropriate to comment on the consideration of any other sanctions cases due to intelligence sensitivities that would surround any such case. However, if additional details are required, we could provide a classified response separately.

- What was the reaction of the Indian Government to the INPA sanctions last year?

*Answer.* In the context of our ongoing dialog with India, we informed the Indian Government when sanctions were imposed. At that time, they expressed serious concerns, and we discussed the sanctions cases as part of the dialog. The Indian Government has made clear to us its commitment to close any loopholes and ensure that its entities are not a proliferation source of sensitive technologies in the future. Among recent steps, India has improved its export control legislation and has harmonized its national control list with the Nuclear Suppliers Group Guidelines.

- What steps has India taken to prevent Indian interactions with Iranian entities or persons closely involved with Iran's atomic energy activities?

Answer. We cannot comment in unclassified channels on specific Indian actions, but would be able to discuss this further in a classified setting.

We believe India has a solid record overall of ensuring that its nuclear-related expertise and technologies do not pose a proliferation risk, and we have an ongoing dialog with India on proliferation issues. India has clearly demonstrated over the past several years its desire to work with the United States and the international community to fight the spread of sensitive nuclear technologies.

As part of an effort launched with India during the administration's first term—the Next Steps in Strategic Partnership—India took a number of significant steps to strengthen export controls and to ensure that Indian companies would not be a source of future proliferation. Not only did India pledge to bring its export control laws, regulations, and enforcement practices in line with modern export control standards, but also passed an extensive export control law and issued an upgraded national control list that will help it achieve this goal.

Other measures were also instituted as a part of the NSSP process, which included India permitting U.S. Government end-use verifications and agreement to increase bilateral and multilateral cooperation on nonproliferation.

In addition, India has become a party to the Convention on the Physical Protection of Nuclear Material and has taken significant steps toward meeting its obligations under UNSCR 1540.

The additional nonproliferation commitments India made as part of the Joint Statement go even further and, once implemented, will bring it into closer conformity with international nuclear nonproliferation standards and practices.

In our view, it is clear that India agrees that Iran's pursuit of a full nuclear fuel cycle makes no sense from an economic or energy-security standpoint. India has called on Iran to return to negotiations with the EU-3 aimed at ending Iran's pursuit of a nuclear weapons capability in exchange for expanded cooperation from Europe and others in the field of peaceful nuclear energy, as well as economic, commercial, political, and security incentives. India has also called on Iran to cooperate fully with the IAEA's ongoing investigations, and to resume a suspension of all enrichment-related and reprocessing activities as a way of building confidence. We welcomed India's decision to join 21 other IAEA Board members in voting to adopt the September 24 resolution that found Iran in noncompliance with its safeguards obligations. That outcome demonstrated to Iran that it is not just the United States and other Western countries that have concerns about Iran's nuclear activities, but the entire international community. India has offered full support to the EU-3's efforts to seek an end to Iran's nuclear weapons ambitions.

#### *India and Iran*

*Question.* India's vote in favor of IAEA Board of Governors (BOG) Resolution GOV/2005/77 was seen by some as a departure from its traditional siding with developing countries in multilateral fora.

Prior to the vote, it had been my understanding that the goal of the United States and the EU-3 at that BOG meeting was to report Iran's noncompliance to the U.N. Security Council.

Indian officials have taken credit for preventing such a report by supporting language that found Iran's noncompliance "within the competence of the Security Council." An earlier Indian Ministry of External Affairs press release regarding a telephone conversation between Indian Prime Minister Singh and Iranian President Ahmadinejad stated that "India supports the resolution of all issues through discussion and consensus in the IAEA."

- What were the reasons India did not support reporting Iranian noncompliance to the Security Council at the last meeting of the BOG?

Answer. India voted for a resolution that requires a report to the United Nations Security Council (UNSC) and finds Iran in noncompliance with its NPT safeguards obligations under Article XII.C of the IAEA Statute. However, the timing and content of this report to the UNSC are still to be determined.

- Under what circumstances would India support reporting Iranian noncompliance to the Security Council?

Answer. In its support for IAEA BOG Resolution GOV/2005/77, India endorsed sending a report to the Security Council. The contents of the report and the timing of transmitting the report are unclear at this point. In our view, it would not be useful to speculate further on this hypothetical question.

- Is it the Administration's position that Iran's noncompliance should be reported to the Security Council?

Answer. The United States has long expressed the view that Iran should be reported to the United Nations Security Council. At the International Atomic Energy Agency's (IAEA) Board of Governors meeting on September 24, India voted—along with the United States and our EU-3 partners—in favor of a resolution that requires a report to the United Nations Security Council and finds Iran in noncompliance with its NPT safeguards obligations under Article XII.C of the IAEA Statute. In addition, for the first time, the IAEA Board concluded with this resolution that Iran's pattern of deception and denial, continued lack of cooperation with the IAEA, and continued pursuit of nuclear fuel cycle capabilities in defiance of the international community, is a matter that falls within the competence of the United Nations Security Council, under Article III.B.4 of the IAEA Statute.

- Does the administration consider Iran's July–August 2005 resumption of uranium conversion activities at UCF-Isfahan to be a breach of its suspension of fuel-cycle activities agreed to with the EU-3?

Answer. Yes. Under the November 2004 Paris Agreement, Iran agreed “on a voluntary basis, to continue and extend its suspension to include all enrichment related and reprocessing activities, and specifically: The manufacture and import of gas centrifuges and their components; the assembly, installation, testing or operation of gas centrifuges; work to undertake any plutonium separation, or to construct or operate any plutonium separation installation; and all tests or production at any uranium conversion installation.” Iran's uranium conversion activities represent a breach of its commitments under the Paris Agreement with the EU-3 and defy the September 24 IAEA Board resolution, which called on Iran to suspend all enrichment-related activity including uranium conversion.

- Does the Indian Government consider Iran's July–August 2005 resumption of uranium conversion activities at UCF-Isfahan to be a breach of its suspension of fuel-cycle activities agreed to with the EU-3?

Answer. We do not know whether India considers Iran in breach of the Paris agreement, an agreement between Iran and the EU-3. Certainly, the EU-3 considers Iran in breach.

*Question.* I understand that India has a formal defense cooperation agreement with Iran. Has the Department been provided with a copy of that Agreement, and if so, could you please furnish it to this committee?

Answer. We do not know of a formal defense cooperation agreement between Iran and India. A Memorandum of Understanding between the Government of the Republic of India and the Government of the Islamic Republic of Iran on Road Map to Strategic Cooperation, was signed on January 23, 2003, in New Delhi by the previous administrations in both countries. According to the Indian Ministry of External Affairs, this MOU set out, among other things, “to agree to explore opportunities for cooperation in defense in agreed areas, including training and exchange of visits.”

*Question.* Public reports in late 2004 suggested that India was considering the sale to Iran of an advanced radar system known as “Super Fledermaus,” a system capable of detecting low-flying objects such as the unmanned aerial vehicles (UAVs) the United States frequently uses to conduct surveillance operations. The radar system is produced by Bharat Electronics Limited (BEL) under license from Ericsson Radar Electronics, a U.S. firm.

(a) Has India decided not to proceed with this sale?

(b) Do you know of other significant defense equipment sales to Iran being considered by India?

Answer.

(a) We understand that the sale of the Super Fledermaus system has not occurred.

(b) We do not know of other significant defense equipment sales to Iran being considered by India.

#### *Interaction with Other Nonproliferation Policies and Countries*

*Question.* Could you please explain how the policy the administration adopted in the Joint Statement is consistent with other administration policies and statements regarding the ongoing crises of noncompliance in North Korea and Iran?

Answer. The Joint Statement represents a carefully tailored approach that helps solve a real-world nonproliferation issue: How to integrate the world's largest democracy and rising 21st power into the nonproliferation mainstream.

We need to adjust our approaches to take into account the conditions that exist, so that we can achieve our nonproliferation objectives. This has been a premise of administration policy since the outset of President Bush's first term, in which he established non- and counterproliferation as top national security priorities. Recognizing that traditional nonproliferation measures were essential but no longer sufficient, the President has established new concepts and new capabilities for countering WMD proliferation by hostile states and terrorists.

There is no comparison between India's nonproliferation history and energy needs, and the compliance violations incurred by Iran and North Korea.

Our position on Iran's nuclear program is well known and is unrelated to our increasing cooperation with India. We do not want to see any additional states developing nuclear weapons, whether Iran, North Korea, or others. Iran's compliance violations are a national security concern to the United States and many of its international partners—not just the EU-3. Indeed, India's September vote in the IAEA Board of Governors which found Iran in noncompliance with its nuclear nonproliferation obligations, demonstrated India's coming of age as a partner in global nonproliferation efforts.

Further, our understanding with India should not affect the Six-Party Talks in any way. India has taken a number of steps to deepen its commitment to nonproliferation and did not violate the NPT in order to pursue its nuclear weapons ambitions since it was not a party to the treaty. There can be no comparison of North Korea's record with that of India. North Korea has violated its NPT and IAEA safeguards commitments; it must abandon its nuclear weapons program.

---

RESPONSES OF UNDER SECRETARY NICHOLAS BURNS TO QUESTIONS SUBMITTED BY  
SENATOR LUGAR

*The Administration's Legislative Proposal and the July 18 Joint Statement*

*Question.* During your testimony before the committee, you seemed to indicate that the administration would prefer India-specific legislative language rather than country-neutral criteria. What are the strengths, in your view, of an India-specific exception to current U.S. law as opposed to a country-neutral exception?

*Answer.* An India-specific exception would build on the precedent set by the Brownback II amendment, which created a South Asia-specific waiver authority for four different statutory sanctions without amending those statutes. An India-specific exception is appropriate to this country-specific initiative and well reflects the need for tailored, actor-specific strategies to combat WMD. It would confirm that the confluence of India's solid nuclear nonproliferation record, enhanced nonproliferation commitments, growing energy needs and strategic position in the world requires an unique approach. Finally, singling out India through legislation would also provide assurances to the Indian Government that the United States intends to develop key aspects of this partnership for the long-term.

*Question.* Is it your view that if Congress did not approve provisions for India related to nuclear energy that the U.S.-India relationship would be harmed?

*Answer.* The initiative to reach civil nuclear cooperation with India recasts one of the most divisive issues in our relationship, and is viewed by many in India as a litmus test for our strategic partnership. If Congress does not approve provisions for India related to nuclear energy, it is likely that the nuclear issue will continue to constrain our diplomatic relationship, as well as our strategic, commercial, defense, and scientific ties, thereby having a negative impact on many of the bilateral activities mentioned in the July 18 Joint Statement.

*Question.* Have Indian officials stated to you that if Congress does not approve a legislative exception for India from current law for nuclear commerce that India would either look differently on its new relationship with the United States or respond negatively to the lack of congressional action?

*Answer.* Indian officials have not stated that they will treat the United States differently if Congress does not take action. They have, however, expressed concern about achieving extensive advances in the future of U.S.-India relations if either side does not complete its Joint Statement commitments.

*Question.* What does India's current plan for its nuclear power sector call for in terms of the types of reactors (heavy- or light-water reactors) it will seek from foreign providers?

*Answer.* Because of the current international restrictions on nuclear commerce with India, India's plan for its nuclear power sector seeks to provide for a 20-fold

increase in nuclear-generated electricity by 2020 without reactors from foreign suppliers. In support of this objective, India's Department of Atomic Energy (DAE) has committed extensive resources to develop a three-stage nuclear fuel cycle, based on its plentiful domestic thorium reserves, that involves fast-breeder reactors, which could pose proliferation risks. Moreover, some specialists assess that such an approach would not prove cost-effective, and there are clear technical challenges to overcome.

Opening the Indian market to foreign suppliers provides India with a vast array of new civil nuclear energy options. Access to new technologies, such as pebble-bed reactors and low-enriched uranium reactors, and participation in the Generation IV Forum (GIF) on advanced nuclear energy systems would encourage more viable and proliferation-resistant alternatives.

*Place in the New Relationship*

*Question.* In testimony before the committee, several experts suggested that creating an exception from long-standing U.S. law and policy, and asking the Nuclear Suppliers Group (NSG) to do the same with respect to NSG Guidelines, damages U.S. nonproliferation leadership, and that the strategic rationale for the Joint Statement does not provide a basis for such changes.

Why does nuclear energy figure so prominently among the many ways the United States can forge a new, strategic partnership with India?

*Answer.* The initiative to reach civil nuclear cooperation with India recasts a divisive issue that has for decades constrained our diplomatic relationship, as well as our strategic, commercial, defense, and scientific ties. In addition to firmly aligning the United States with a country that shares our democratic values and commitment to freedom, it holds substantial, concrete benefits for the United States, India, and the global community.

When implemented, all the steps that India pledged on July 18 will strengthen the international nonproliferation regime, and bolster our efforts to prevent the spread of weapons of mass destruction. Commercially, the opening of India's lucrative and growing civil nuclear energy market to U.S. firms could provide jobs for thousands of Americans, and provide India with a vast array of clean and viable options to meet its skyrocketing energy needs. India's participation in the International Thermonuclear Experimental Reactor (ITER) program will add significant resources and critical talent to global efforts to develop fusion as a cheap energy source program. If India joins the Generation IV International Forum (GIF), it could contribute to GIF's mission to make the next generation of reactors safer, more efficient and more proliferation resistant. Finally, these efforts will also help India pursue its ambitious plans for power development and electrification in a more environmentally friendly manner.

---

RESPONSES OF UNDER SECRETARY ROBERT JOSEPH TO QUESTIONS SUBMITTED BY  
SENATOR LUGAR

*The Administration's Legislative Proposal and the July 18 Joint Statement*

*Question.* In your statement you note that Congress should not "make the perfect the enemy of the good" and that adding any conditions to the eventual changes to law that Congress might make for India would be a "deal breaker."

- Do you mean that the entire set of things contained in the Joint Statement, beyond civil nuclear cooperation, would also be sacrificed if Congress conditioned nuclear commerce with India on things not detailed in the Joint Statement?

*Answer.* I testified that, based on our interactions with the Indian Government, we believe that additional conditions such as implementing a moratorium on fissile material production, ratifying the Comprehensive Test Ban Treaty, and/or joining the NPT as a nonnuclear weapon state "would likely be deal breakers."

The initiative to reach civil nuclear cooperation with India will remove one of the most divisive issues in our bilateral relationship. If the civil nuclear aspects of the Joint Statement are not realized, we believe that our diplomatic relationship and our strategic, commercial, and scientific ties will remain constrained; many of the bilateral activities delineated in the statement will be adversely affected.

The critical point is that we must resist the temptation to pile on conditions that will prejudice our ability to realize the important and long-standing nonproliferation objectives embodied in the Joint Statement. We assess that additional conditions such as those specified above remain deal breakers for India. We are better off with India undertaking the nonproliferation commitments to which it has now agreed than in allowing status quo stalemates to prevail.

*Question.* Does the administration oppose any additional nonproliferation measures for India beyond those stipulated in the Joint Statement?

*Answer.* I testified that, based on our interactions with the Indian Government, we believe that additional conditions such as implementing a moratorium on fissile material production, ratifying the Comprehensive Test Ban Treaty, and/or joining the NPT as a nonnuclear weapon state “would likely be deal breakers.”

In our ongoing dialogs, we strongly encourage India to take additional steps to strengthen nonproliferation, such as joining PSI and harmonizing its national control lists with those of the Australia Group and Wassenaar Arrangement. We have indicated that we also plan to continue to discuss such issues as a fissile material cutoff. But we strongly recommend against adding additional conditions to Joint Statement implementation. The Joint Statement reached by President Bush and Prime Minister Singh is good both for India and for the United States, and when implemented, offers a net gain for global nonproliferation efforts. Rather than add additional conditions or seek to renegotiate the Joint Statement, we believe it would be better to lock in this deal and then seek to achieve further results as our strategic partnership advances. We believe that this is a sound arrangement that should be supported because the commitments India has made, will, when implemented, bring it into closer alignment with international nuclear nonproliferation standards and practices and, as such, strengthen the global nonproliferation regime.

*Question.* Could you please provide me with your views with regard to each of the following items, items which have been proposed as those I might consider including in legislation:

- A requirement that India stop producing fissile materials for nuclear weapons.

*Answer.* I testified that, based on our interactions with the Indian Government, we believe that additional conditions such as implementing a moratorium on fissile material production, ratifying the Comprehensive Test Ban Treaty, and/or joining the NPT as a nonnuclear weapon state “would likely be deal breakers.”

We have sought India’s curtailment of fissile material production but have not reached agreement on this issue. In our assessment, insisting on such a cutoff as a precondition for implementing the Joint Statement would likely be a deal breaker for the Indian Government. We believe that we achieved an important objective, however, by obtaining India’s commitment to designate, separate, and safeguard its civilian nuclear program. Moreover, the commitment to work toward the completion of a Fissile Material Cutoff Treaty (FMCT) is a significant step.

We continue to encourage India, as well as Pakistan, to move in the direction of a fissile material cap or moratorium as part of our discussions with both governments. We also are willing to explore other intermediate options that might serve such an objective.

The Joint Statement does not alter our policy on FMCT. We continue to support immediate commencement of negotiations in the Conference on Disarmament of a treaty banning production of fissile material for use in nuclear weapons or other nuclear explosive devices. We welcome India’s support for the FMCT, which should help to build a consensus to begin those negotiations.

- A requirement that India declare it will not conduct any more tests of its nuclear weapons.

*Answer.* I testified that, based on our interactions with the Indian Government, we believe that additional conditions such as implementing a moratorium on fissile material production, ratifying the Comprehensive Test Ban Treaty, and/or joining the NPT as a nonnuclear weapon state “would likely be deal breakers.”

In principle, making new U.S. law or waivers contingent on India fulfilling its commitments in the Joint Statement is a sound idea. As reflected in its pledge in the Joint Statement, India has already declared that it will maintain its nuclear testing moratorium. Since to date Pakistan has test-exploded nuclear weapons only in response to Indian nuclear tests, this commitment should help diminish the prospects for future nuclear testing in South Asia.

- A distinction between India and NPT parties that would provide different treatment in terms of the nuclear exports for non-NPT parties, i.e., India would be eligible for most U.S. exports except equipment, materials, or technology related to enrichment, reprocessing, and heavy water production.

*Answer.* I testified that, based on our interactions with the Indian Government, we believe that additional conditions such as implementing a moratorium on fissile material production, ratifying the Comprehensive Test Ban Treaty, and/or joining the NPT as a nonnuclear weapon state “would likely be deal breakers.”

We do not export enrichment or reprocessing technology to any state. Therefore, “full civil nuclear cooperation” with India will not include enrichment or reprocessing technology. We have not yet determined whether such a prohibition would extend to heavy water production.

- Permitting U.S. nuclear exports only to those Indian facilities, sites, and locations that are under IAEA safeguards in perpetuity—not to facilities, sites, or locations under voluntary safeguards arrangements.

Answer. I testified that, based on our interactions with the Indian government, we believe that additional conditions such as implementing a moratorium on fissile material production, ratifying the Comprehensive Test Ban Treaty, and/or joining the NPT as a nonnuclear weapon state “would likely be deal breakers.”

To ensure that the United States and other potential suppliers can confidently supply to India and meet our obligations under the NPT, IAEA safeguards on civil facilities must be applied in perpetuity. We, and other potential suppliers, will be unable to supply facilities that are not under permanent safeguards.

#### *India’s Violations of U.S. Law*

*Question.* In testimony before the House on October 26, 2005, Leonard S. Spector, Deputy Director of the Center for Nonproliferation Studies at the Monterey Institute of International Studies, stated that

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.

- What is the status of India’s violation of its peaceful use undertakings in the 1956 U.S. heavy-water contract, are they “ongoing” or are they, as a result of the termination of U.S.-Indian nuclear cooperation, no longer operative?

Answer. India used heavy water that the United States provided under a 1956 Nuclear Regulatory Commission (NRC) contract—along with Indian and third-country heavy water—as a moderator for the Canadian-provided CIRUS research reactor, the reactor India reportedly used to generate plutonium for its weapons program.

After India detonated a nuclear device in 1974, the U.S. Government examined whether India’s actions were inconsistent with a clause under the 1956 contract stating that the heavy water would be used for “research into and the use of atomic energy for peaceful purposes.” The outcome was that a conclusive answer was not possible due to both the factual uncertainty as to whether U.S.-supplied heavy water contributed to the production of the plutonium used for the device and the lack of a mutual understanding of scope of the 1956 contract language.

- Has any of the plutonium from CIRUS that was produced using U.S.-origin heavy water been incorporated into Indian nuclear explosive devices or used in any Indian tests of nuclear explosive devices?

Answer. As noted above, a conclusive answer has not been possible as to whether U.S.-supplied heavy water contributed to the production of the plutonium used for Indian nuclear explosive devices.

- Will the administration, as a part of the process under the Joint Statement, obtain from India a full, accurate, and complete account of the disposition of any U.S.-origin heavy water in India?

Answer. The administration believes the most productive approach is to focus on India’s new commitments under the Joint Statement. These commitments include, among other things, acceptance of IAEA safeguards (including monitoring and inspections of its civil nuclear facilities and programs), and agreement to sign and implement the Additional Protocol, which provides for broadened access to locations and information regarding nuclear and nuclear-related activities.

- Does the Government of India acknowledge that its unauthorized end use of U.S.-origin heavy water supplied for the CIRUS reactor was a violation of U.S. law?

Answer. Following India’s 1974 detonation of a nuclear device, the Government of India plainly stated its disagreement with the United States over the meaning and scope of the clause in the 1956 contract that stipulated that the heavy water would be used for “research into and the use of atomic energy for peaceful purposes.”

At the time, the debate on whether India had violated the contract was inconclusive owing to the uncertainty as to whether U.S.-supplied heavy water contributed to the production of the plutonium used for the 1974 device and the lack of a mutual understanding of scope of the 1956 contract language on “peaceful purposes.”

We have since made it clear that we exclude so-called “peaceful nuclear explosions”—and any nuclear explosive activity—from the scope of peaceful nuclear cooperation.

India has not acknowledged to the United States that it considered that its use of U.S.-supplied heavy water was a violation of the 1956 contract.

- Does the Government of India acknowledge that its 1974 nuclear weapon test was not a “peaceful nuclear explosion”?

Answer. It is our understanding that it remains the view of the Indian Government that its test of a nuclear explosive device in 1974 was a “peaceful nuclear explosion.”

- If India declares that CIRUS is a peaceful reactor, would any plutonium produced there need to be removed from those plutonium stocks that India has set aside for weapons and placed under permanent IAEA safeguards?

Answer. We do not yet have from the Government of India a plan outlining which of its nuclear facilities will be declared civilian; our discussions continue.

The details of the safeguards agreement which India has undertaken to negotiate with the IAEA will presumably follow. However, as most such agreements are not retroactive, we would not expect the agreement to specify that previously produced material must be returned to the plant in order to be placed under safeguards. Were the plant to be placed under safeguards, those safeguards would be applicable in perpetuity to any material produced by, used by, or stored in the plant after the effective date of the agreement.

#### *Safeguards Verification and Compliance*

*Question.* Has the Government of India entered into discussions with International Atomic Energy Agency (IAEA) officials regarding a new declaration of civil nuclear sites, facilities, or locations?

Answer. To our knowledge, the Government of India has not yet entered into discussions with the IAEA. Such a step might be viewed as premature, considering that India has not yet developed a separation plan upon which such a declaration would be based. We have indicated that such a plan must be credible, transparent, and defensible from a nonproliferation standpoint.

*Question.* When will India submit a new declaration to the IAEA of its civil sites, facilities, or locations that would be subject to safeguards?

Answer. There is no set date. The first step is for India to develop a credible and transparent plan for separating its civil and military facilities and programs. We hope that such a separation plan and subsequent declaration to the IAEA of what is to be civilian—as well as initial implementation toward safeguarding its facilities—can be accomplished by early 2006.

*Question.* What kinds of safeguards will be applied to India’s declared civil sites, facilities, or locations (please specify IAEA Information Circular (INFCIRC) number)?

Answer. Safeguards agreements are modeled after INFCIRC/153 (the NPT safeguards agreement) or INFCIRC/66 (the Agency’s safeguards system predating the NPT). India will not likely sign a safeguards agreement based strictly on INFCIRC/153, as this would require safeguards on India’s nuclear weapons program. NPT-acknowledged nuclear weapon states have so-called “voluntary” safeguards agreements that draw on INFCIRC/153 language, but do not obligate the IAEA to actually apply safeguards and do allow for the removal of facilities or material from safeguards. We heard from other states at the recent NSG meeting that they would not support a “voluntary offer” arrangement as, in their view, it would be tantamount to granting de facto nuclear weapon state status to India. We have similarly indicated to India that we would not view such an arrangement as defensible from a nonproliferation standpoint. We, therefore, believe that the logical approach to formulating a safeguards agreement for India is to use INFCIRC/66, which is currently used at India’s four safeguarded reactors. For the most part, INFCIRC/66 and INFCIRC/153 agreements result in very similar technical measures actually applied at nuclear facilities.

*Question.* Will India allow the safeguards applied to its declared civil sites, facilities, or locations to be permanent, i.e., that no declared site, facility, or location may

be removed from India's declaration to the IAEA and that the safeguards in place on those declared sites, facilities, or locations are to be in place in perpetuity?

Answer. We do not view a safeguards agreement that would allow India to withdraw facilities or material from safeguards as acceptable, and we have informed India of this view. Among other considerations, we must be assured that safeguards will be applied in perpetuity, that "civil" material remains in the civil sector, and that any assistance provided in no way contributes to India's nuclear weapons program. The safeguards must effectively cover India's civil nuclear fuel cycle and provide strong assurances to supplier states and the IAEA that material and technology provided or created through civil cooperation will not be diverted to the military sphere.

*Question.* Has the administration briefed the IAEA on its discussions of a civil-military split in Indian sites, facilities, or locations, and if so, when?

Answer. No, we have not briefed the IAEA Secretariat on our discussions of a civil-military split in Indian sites, facilities, or locations. The IAEA Secretariat will play an essential role in this process, but that role is still in the future, once India has taken certain key steps and there is a clearer understanding and acceptance of India's separation plan.

*Question.* What are the general "phases" (not dates) that will unfold under the Joint Statement's terms with respect to India's separation of its civil and military nuclear facilities, sites, or locations?

Answer. The first step in the process will be for India to produce a general plan for the separation of its civil and military facilities and programs. We expect that India will propose a civil-military separation plan that is credible, transparent, and defensible from a nonproliferation standpoint. Such a plan would form the basis for a declaration by India to the IAEA of its civil facilities. It would also form the basis for the negotiation of a safeguards agreement between the IAEA and India. Negotiation of an Additional Protocol would probably proceed in parallel with the negotiation of the basic safeguards agreement, but this remains to be determined. Upon completion and entry into force of the safeguards agreement, the IAEA would begin inspections of Indian nuclear facilities. Based on the language of the Joint Statement, we expect that it will take some time to complete full implementation of safeguards at India's civil facilities, and thus implementation would occur in a "phased" manner, based on a sequence identified in the separation plan and as agreed to with the IAEA and as specified in the safeguards agreement.

*Question.* The IAEA, because of budgetary pressures, discontinued inspections in the United States in 1993, largely because the value of such inspections is of limited utility in states with declared and lawful nuclear weapons programs. At the request of the U.S. Government, the IAEA resumed inspections in 1994 by applying safeguards to several tons of weapons-usable nuclear material, which had been declared excess to U.S. national security stockpiles. The IAEA undertook this effort on the condition that the United States reimburse the IAEA.

The Joint Statement notes that India will "assume the same responsibilities and practices and acquire the same benefits and advantages as other leading countries with advanced nuclear technology, such as the United States."

- Will India declare a portion of its weapons-usable materials excess to its defense needs and place them under permanent IAEA safeguards?

Answer. India has not informed us of whether it views any existing weapons-usable material as "excess."

- Will India reimburse the IAEA for any inspections conducted in India on safeguarded facilities, sites, locations, and materials?

Answer. To our knowledge, the IAEA and India have not yet discussed whether India will reimburse the IAEA for any inspections conducted in India on safeguarded facilities, sites, locations, and materials.

*Question.* Do you assess that the IAEA currently has the staff, funding, and necessary information to support safeguards monitoring for India without taking away from inspection and verification efforts in other countries?

Answer. We recognize that implementing safeguards in India will entail significant costs that are not currently included in the IAEA's budget. We look forward to working with the IAEA and the Government of India to estimate those costs and to identify how best to meet them without undercutting inspections/verification efforts in other countries.

*Question.* Would India permit the IAEA, as a confidence-building measure, to conduct inspections of its declared facilities, sites, or locations, and if so, how many such inspections and how many facilities, locations, or sites would be inspected?

*Answer.* The safeguards agreement that India negotiates with the IAEA after developing a separation plan will require sustained IAEA inspections on all Indian civil facilities containing nuclear material, with frequency to be determined by the IAEA. The Additional Protocol will allow inspections of additional nuclear-related locations.

*Question.* Will the Additional Protocol (AP) that India signs be identical to the Model Additional Protocol (INFCIRC/540)?

*Answer.* No. The Model Additional Protocol is structured to accompany a country's full-scope safeguards agreement. Because India's safeguards agreement will differ from a full-scope safeguards agreement, India's Additional Protocol will differ from the Model as well.

*Question.* In the Joint Statement the Indian Prime Minister states that India commits to "signing and adhering to an Additional Protocol with respect to civilian nuclear facilities." Does this mean that India would not ratify and implement its Additional Protocol?

*Answer.* No. We expect that India will ratify and implement both its safeguards agreement and its Additional Protocol.

*Question.* Is it permissible for any Non-Nuclear Weapon State (NNWS) under the NPT to sign and adhere to, but not to ratify and implement, the Additional Protocol?

*Answer.* While India is not a party to the NPT, nonnuclear weapon states party to the NPT are obliged under the NPT to bring into force a full-scope safeguards agreement, effectively covering all nuclear material in the state. The NPT does not, however, require such a party to either sign or bring into force an Additional Protocol, whose provisions strengthen the safeguards agreement beyond what is required by the NPT. The Additional Protocol's provisions include, for example, requirements to declare information regarding, and to allow access to, locations that do not involve nuclear material. The NPT also does not, unlike the NSG, condition full scope safeguards as a condition of nuclear supply. Rather the NPT requires that cooperation does not "in any way assist" any weapon program in nonnuclear weapon states.

*Question.* Is it permissible for any Nuclear Weapon State (NWS) under the NPT to sign and adhere to, but not to ratify and implement, the Additional Protocol?

*Answer.* Nuclear weapon states parties to the NPT are not required by the NPT to sign any type of safeguards or inspection agreement, including an Additional Protocol. All such undertakings by the nuclear weapon states are voluntary.

*Question.* Will the Additional Protocol that India signs permit it to exclude the application of safeguards to any facilities, sites, or locations in India?

*Answer.* India has not yet negotiated an Additional Protocol with the IAEA. The Joint Statement indicates that India's Additional Protocol will apply to Indian civil nuclear facilities, and we expect that there will be some language in the Indian Additional Protocol making its scope consistent with that concept. We believe it is unlikely that India will permit access to its nuclear military facilities under its Additional Protocol.

*Question.* When will India sign an AP?

*Answer.* There is not yet an established timetable for this step. The actions India committed to, in the Joint Statement, involve complex issues, and they will take time to implement fully. We hope to move expeditiously on all aspects of the civil nuclear initiative and will assess progress prior to President Bush's expected trip to India in early 2006.

*Question.* What would be the relationship between India's list of declared civil sites subject to safeguards and its AP? Are the provisions of its AP binding on its declared civil sites?

*Answer.* Two types of inspections would presumably occur at civil facilities in India: Safeguards inspections that would take place at nuclear facilities containing nuclear material of a defined purity, and complementary access inspections that would take place at other facilities, which, with minor exceptions, do not contain such material. The first type of facilities is declared and inspected as specified by the safeguards agreement, and the second type is declared and inspected as de-

scribed by the Additional Protocol. The two types of facilities are distinct, but we anticipate that both would be part of an Indian declaration. The requirements on the state to provide information and access are equally binding in the two cases.

*Question.* With regard to the plan that GOI will bring here this month, and in connection with the principle of “Transparency”: If we are talking about an INFCIRC/66 Rev.2 [safeguards agreement] (SGA), it would clearly spell out which facilities were covered by the terms of that SGA. But if India does a voluntary safeguards agreement, or has some sites covered under a voluntary SGA, or sites, facilities, and locations colocated with sites that are not covered by the terms of an INFCIRC/66 Rev.2 SGA, then some of the list of eligible, declared civilian facilities would be considered “safeguards-confidential” not under an INFCIRC/66 Rev.2 SGA nor made all that transparent. In other words, there would be an INFCIRC agreement, but no one would have access to the actual list of sites, facilities, and locations (like our Voluntary Offer SGA).

- Are we prepared to accept a mixed situation in India? Some sites under VOA-type SGAs and some under INFCIRC/66 Rev.2 SGAs? Does the IAEA hold such a situation with any other countries?

*Answer.* Because the IAEA publishes a list of all facilities to which safeguards are applied, all exporters will be aware of which facilities in India they can export to. So-called “voluntary offer” agreements are used only by the five NPT-recognized nuclear weapon states. In general, voluntary arrangements allow the covered state to withdraw facilities and material from safeguards at will. In our view, a voluntary offer arrangement for India would be inconsistent with the Joint Statement and would not be defensible from a nonproliferation standpoint.

- Is the administration looking to accept a cooperation agreement that would already be covered by an existing 66 agreements (i.e., Tarapur), and then let India put additional civilian facilities on an eligible list?

*Answer.* Both an Agreement for Peaceful Nuclear Cooperation between the United States and India and a new safeguards agreement between India, the IAEA, and possibly other parties, would have to be negotiated.

There is no “eligible list” associated with current Indian safeguards arrangements, which conform to INFCIRC/66. We expect India “to place all its civil nuclear facilities under full IAEA safeguards and that includes monitoring and inspections,” as Under Secretary Burns said July 20, 2005. Since a voluntary offer arrangement would not require the IAEA to apply safeguards to facilities on a list of those eligible for safeguards, it would not meet that standard. Furthermore, in order to provide reasonable assurances to potential suppliers that they are not assisting the Indian nuclear weapons program, among other things safeguards must be applied in perpetuity and “civil” nuclear material must remain civil.

#### *India’s Export Control Laws, Regulations, and Policies*

*Question.* Has the administration undertaken an expert-level legal analysis of India’s export control laws and regulations?

*Answer.* Department of State and Commerce lawyers and export control experts have reviewed India’s Weapons of Mass Destruction and Their Delivery Systems (Prohibition of Unlawful Activities) Act, adopted in 2005, consistent with India’s NSSP and Joint Statement commitments. We continue to discuss export control related issues with the Government of India.

*Question.* If so, could you please furnish that analysis to this committee?

*Answer.* There is today no consolidated analytical document representing an inter-agency assessment of India’s export control law and regulations. As always, we stand ready to brief the committee on the results of our review.

*Question.* I understand that the State Department sent a number of questions concerning India’s export control law(s) (what is termed its “WMD law”) to New Delhi some time ago. Has the Government of India answered all of those questions, and could you please furnish (a) those questions and (b) answers to this committee?

*Answer.* Given the sensitivities of the diplomatic communications involved, we cannot provide the information for the record. However, we would be happy to provide the committee with a briefing on our exchanges with India on this issue. We intend to have follow-on discussions regarding the implementation of the WMD law within the High Technology Cooperation Group meetings in early December 2005.

*Question.* Does Indian law specify anything with regard to the reexport or resale of foreign-origin dual-use equipment?

Answer. As we understand the Indian legislation, export from India of foreign-origin dual-use equipment exported to India, if of types covered by India's own control list and catch-all controls, would be subject to the same requirements that apply to export of Indian-origin goods.

*Question.* What does Indian law specify about the access of either foreign nationals or dual-nationals to sensitive items exported from other nations to India?

Answer. India's new WMD law deals specifically with the possession, export, re-export, transfer, and other conveyance or trafficking of WMD and their delivery systems, their components, and related technology by Indian and foreign nationals. The law, however, does not address access by foreign nationals or dual nationals to such items or technology in the course of those individuals' legitimate employment in India.

Clause 13(4) of the WMD law seems to address in-country transfers of items to foreigners, but the operation of this provision is not entirely clear.

*Question.* Do any foreign nationals or dual-nationals work at or have access to sites currently subject to IAEA safeguards in India (Rajasthan 1 & 2 and Tarapur 1 & 2)?

Answer. We do not have sufficient information as to which specific foreign nationals may work or have access to these facilities. In general, however, IAEA inspectors, who are foreign nationals, have access to Rajasthan 1 & 2 and Tarapur 1 & 2, since these sites are subject to IAEA safeguards. The Indians have also granted Nuclear Regulatory Commission (NRC) delegations limited access to those facilities, most recently in February 2005. Additionally, the World Association of Nuclear Operators (WANO) is able to conduct peer reviews at these sites.

*Question.* Do any foreign nationals or dual-nationals work at or have access to the Indian nuclear facilities Kundankulam 1 and 2?

Answer. We do not have sufficient information as to which specific foreign nationals may work or have access to these facilities. In general, however, Kundankulam 1 & 2 are being constructed under a contract between India and the Russian Federation, so we presume that Russian nationals have access to these sites. IAEA inspectors, who are foreign nationals, will eventually have access to Kundankulam 1 & 2, once they are placed under IAEA safeguards.

*Question.* Do any foreign nationals or dual-nationals work at or have access to the Indian Space Research Organization (ISRO) Headquarters in Bangalore, India; ISRO Telemetry, Tracking and Command Network (ISTRAC); ISRO Inertial Systems Unit (IISU), Thiruvananthapuram; Liquid Propulsion Systems Center; Solid Propellant Space Booster Plant (SPROB); Space Applications Center (SAC), Ahmadabad; Sriharikota Space Center (SHAR); Vikram Sarabhai Space Center (VSSC), Thiruvananthapuram?

Answer. We do not have sufficient information as to which, if any, foreign nationals may work or have access to these facilities. We stand ready to discuss this and other considerations relating to these organizations further with the committee in a separate classified forum.

*Question.* Do any foreign nationals or dual-nationals work at or have access to the following Indian Department of Atomic Energy entities: Bhabha Atomic Research Center (BARC); Indira Gandhi Atomic Research Center (IGCAR); Indian Rare Earths; Nuclear reactors (including power plants) not under International Atomic Energy Agency (IAEA) safeguards, fuel reprocessing and enrichment facilities, heavy water production facilities and their collocated ammonia plants?

Answer. We do not have sufficient information as to which, if any, foreign nationals may work or have access to these facilities. We stand ready to discuss this and other considerations relating to these organizations further with the committee in a separate classified forum.

*Question.* Does Indian law contain "catch-all" controls on items not otherwise stipulated in national controls?

Answer. Clause 11 of the 2005 WMD law prohibits export of any material, equipment, or technology if the exporter knows that the exported items are intended for use in the design or manufacture of a biological weapon, chemical weapon, nuclear weapon, or other nuclear explosive device, or in their missile delivery systems, but does not specifically refer to transfers, retransfers, items brought in transit or transshipment. We read Clause 11 of the 2005 WMD law as a catch-all provision similar to the "knows" portion of the U.S. catch-all control provisions. Clause 5 of the 2005

WMD law may provide the equivalent of the “is informed” portion of the U.S. catch-all controls over exports, reexports, transshipments, and transits.

*Question.* Have there been successful prosecutions of entities or persons brought by the Government of India for violations of its export control laws?

*Answer.* The Government of India has been actively prosecuting the Indian entity NEC Engineers Private Ltd.’s cooperation with Iraq. According to Indian press reports, NEC sent 10 shipments containing titanium vessels, filters, titanium centrifugal pumps, atomized and spherical aluminum powder, and titanium anodes to Iraq. The NEC prosecution is ongoing.

We do not have information on other examples of Indian prosecutions regarding violations of its export control laws. One reason for this is that, before India passed its WMD law this year, its governmental authority over such export activities was relatively limited. India’s new WMD law has greatly increased its ability to hold its entities and individuals accountable for activities that impinge on nonproliferation practices.

*Question.* Did India pursue any action (civil or criminal) against Dr. Y.S.R. Prasad and Dr. C. Surendar after the United States sanctioned them under the authority of the Iran Nonproliferation Act of 2000 (P.L. 106–178)?

*Answer.* We understand that India investigated the activities of the retired scientists Dr. Y.S.R. Prasad and Dr. C. Surendar after the United States imposed sanctions on them in September 2004. As far as we are aware, India did not pursue any civil or criminal action against Drs. Prasad or Surendar.

*Question.* Does the United States have any information that Indian entities or persons in the United States have engaged in attempts to falsify necessary bona fides in transactions with U.S. entities or persons?

*Answer.* Any such activities would be regarded as a law enforcement matter in this country. Any such matters would need to be addressed to the Department of Justice, Department of Commerce, and/or the Department of Homeland Security.

*Question.* In oral remarks made at the Department of Commerce’s annual Bureau of Industry Security (BIS) “Update” Conference recently held in Washington, DC, Steven Goldman, director of the BIS Office of Nonproliferation and Treaty Compliance, stated that “India has modified its approach, has made major commitments, in many respects commitments that exceed those of our closest allies.”<sup>1</sup>

Do you concur with this assessment, and if so, how does India exceed the nonproliferation commitments made by our closest allies, in particular, those who are nuclear weapon states (such as the United Kingdom) under Article I of the NPT?

*Answer.* The Department of State agrees that India has made major commitments which, when implemented, will bring it closer into conformity with nonproliferation standards and practices. India has committed to a number of important nonproliferation steps. Some of these steps exceed NPT requirements, such as India’s export-restraint of enrichment and reprocessing technologies and its willingness to sign and adhere to an Additional Protocol.

#### *RMP Facility*

*Question.* Do you concur with the assessment of alleged Indian attempts to illicitly acquire certain dual-use nuclear technology provided by David Albright during testimony before the House on October 26, 2005? Which states in relevant part:

Indian nuclear organizations use a system that hires domestic or foreign nonnuclear 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.<sup>2</sup>

*Answer.* We cannot comment in any detail in unclassified channels on assessments of activities of Indian entities or facilities. We could discuss further in classified session.

<sup>1</sup>As found at [http://www.exportcontrolblog.com/blog/2005/10/update\\_day\\_one\\_4.html](http://www.exportcontrolblog.com/blog/2005/10/update_day_one_4.html).

<sup>2</sup>Available at [http://www.house.gov/international\\_relations/109/alb102605.pdf](http://www.house.gov/international_relations/109/alb102605.pdf).

*Question.* What is the purpose of the RMP facility?

*Answer.* We cannot comment in any detail in unclassified channels on assessments of activities of Indian entities or facilities. We could discuss further in classified session.

*Question.* The Commerce Department issued revised U.S. regulations for balance of plant exports to certain Indian entities last September.<sup>3</sup> The Indian Department of Atomic Energy entity called “Indian Rare Earths” is named in those FR notices, but could you please explain for the record the current regulatory treatment provided to the entity Indian Rare Earths under current law and regulation?

*Answer.* The September 22, 2004, regulatory change did not change the regulatory treatment for Indian Rare Earths. India Rare Earths is still a listed entity under Commerce regulations, as it has been since the sanctions were imposed in 1998. Therefore, under the Export Administration Regulations, exporters need to apply for licenses to export even uncontrolled commodities to this end-user.

*Proliferation Security Initiative*

*Question.* Why has India not joined the Proliferation Security Initiative (PSI)?

*Answer.* The United States has encouraged India to join PSI, given its geographic location along several key routes for proliferation trafficking and its significant operational capabilities in the region. Officials of the Government of India have told us that they are continuing their internal review of PSI, including an examination of the international and national legal underpinnings for their possible participation in PSI. We are hopeful that India will soon endorse PSI, and join the more than 70 countries around the world—and United Nations Secretary General Kofi Annan—that have expressed their support for PSI.

*Question.* What are the views of the Government of India on the Statement of Interdiction Principles?

*Answer.* Officials of the Government of India have told us that they are continuing their internal review of PSI, including an examination of the international and national legal underpinnings for their possible participation in PSI. We are hopeful that India will soon endorse the PSI Statement of Interdiction Principles, and join the more than 70 countries around the world—and United Nations Secretary General Kofi Annan—that have expressed their support for PSI.




---

<sup>3</sup> 69 FR 56,693 (2004), revised in 69 FR 58,049 (2004).