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UNITED STATES–INDIA PEACEFUL ATOMIC ENERGY COOPERATION AND U.S. ADDITIONAL PROTOCOL IMPLEMENTATION ACT

R E P O R T

OF THE

COMMITTEE ON FOREIGN RELATIONS

[TO ACCOMPANY S. 3709]

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Mr. LUGAR, from the Committee on Foreign Relations, submitted the following

REPORT

[To accompany S. 3709]

The Committee on Foreign Relations, having had under consideration an original bill (S. 3709) to exempt from certain requirements of the Atomic Energy Act of 1954, United States exports of nuclear materials, equipment, and technology to India, and to implement the United States Additional Protocol, reports favorably thereon and recommends that the bill do pass.

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I. PURPOSE AND SUMMARY

The United States-India Peaceful Atomic Energy Cooperation Act would exempt from certain requirements of the Atomic Energy Act of 1954 (42 USC 2011 et seq.), exports of nuclear material, equipment and technology from the United States, and reexports of such U.S.-origin items, to India. Such items have not been transferred to India by the United States since India's detonation of a nuclear explosive device in the 1970s and the subsequent decision by the United States to cease nuclear cooperation with India.

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On July 18, 2005, President Bush and Prime Minister Manmohan Singh of India issued a Joint Statement. The Joint Statement covered a range of issues and common interests between the two leaders and their nations, and in it both leaders also committed to re-establishing civil nuclear commerce between the United States and India, and between other nations of the world and India, if India completed a set of steps that would result in greater adherence to the global nonproliferation regime of multilateral export control groups and treaties. President Bush committed that he would "work to achieve full civil nuclear energy cooperation with India as it realizes its goals of promoting nuclear power and achieving energy security" and to "seek agreement from Congress to adjust U.S. laws and policies" to permit that cooperation.[1] President Bush also promised to "work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India, including but not limited to expeditious consideration of fuel supplies for safeguarded nuclear reactors at Tarapur."[2]

Prime Minister Singh also made commitments on the part of India:

> The Prime Minister conveyed that for his part, India would reciprocally agree that it would be ready to 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. These responsibilities and practices consist of identifying and separating civilian and military nuclear facilities and programs in a phased manner and filing a declaration regarding its civilian facilities with the International Atomic Energy Agency (IAEA); taking a decision to place voluntarily its civilian nuclear facilities under IAEA safeguards; signing and adhering to an Additional Protocol with respect to civilian nuclear facilities; continuing India's unilateral moratorium on nuclear testing; working with the United States for the conclusion of a multilateral Fissile Material Cut Off Treaty; refraining from transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread; and ensuring that the necessary steps have been taken to secure nuclear materials and technology through comprehensive export control legislation and through harmonization and adherence to Missile Technology Control Regime (MTCR) and Nuclear Suppliers Group (NSG) guidelines.[3]

Strategic Rationale:

The India agreement is perhaps the most important strategic diplomatic initiative undertaken by this administration, and it represents a fundamental departure from the crisis management mentality that has dominated foreign policy in recent years. By concluding this pact and the far-reaching set of cooperative agreements that accompany it, the President has embraced a long-term outlook that seeks to strengthen our foreign policy in a way that will give us new diplomatic options and improve global stability. With this agreement, the administration is asking Congress to see the opportunities that lie beyond the horizon of the current presidential term.

The committee studied carefully the implications of the nuclear pact on non-proliferation policy. It was concerned about the prece-

[1] Available at http://www.whitehouse.gov/news/releases/2004/09/20040921–18.html. The full text is reproduced in the annex to this report.
[2] Ibid.
[3] Ibid.

dent set by this action, and worked to ensure that this agreement does not undercut U.S. compliance with its responsibilities under the Nuclear Non-Proliferation Treaty. The committee believes that its bill achieves a proper balance and will help solidify New Delhi's commitments to implement strong export controls, separate its civilian nuclear infrastructure from its weapons program, and place civilian facilities under IAEA safeguards. This agreement also would be a powerful incentive for India to cooperate closely with the United States in stopping proliferation and to abstain from further nuclear weapons tests.

The administration's declaration that we would welcome India's advancement as a major economic and political player on the world stage represents a strategic decision to invest political capital in a country with a vibrant democracy, rapidly growing economy, and increasing clout. With a well-educated middle class that is larger than the entire U.S. population, India can be an anchor of stability in Asia and an engine of global economic growth.

It can also be a key partner in countering global extremist trends. Both the United States and India understand the importance of opposing violent movements through the promotion of religious pluralism, tolerance, and democratic freedoms. As a country with well-entrenched democratic traditions and the world's second largest Muslim population, India can set an example of a multi-religious and multi-cultural democracy in an otherwise volatile region.

India is already assuming a new role in world affairs. Its votes at the IAEA on the Iran issue in September 2005 and February 2006 demonstrate that New Delhi is able and willing to adopt a more constructive role on international non-proliferation issues. India continues to prize its strategic autonomy, but this agreement will give it increasing incentives to use its influence to bring about international stability and global economic progress.

Historical Background:

The committee notes that the administration had, even before the July 18, 2005 Joint Statement, already significantly revised certain U.S. laws and policies regarding sensitive technology exports to India. Under the "Next Steps in Strategic Partnership" (NSSP), a substantial number of changes to the Export Administration Regulations (the EAR, 15 CFR 730–744) were made for India. The NSSP began with the November 2001 statements between President Bush and then-Indian Prime Minister Vajpayee and was formally announced in a statement by President Bush on January 12, 2004.[4] The NSSP apparently culminated in the July 18, 2005 Joint statement. The items that have had new treatment extended to them in respect of their export to India from the United States have included technologies in sensitive areas such as space launch, advanced computing, and information on certain missile defense systems.

In September 2004, and again in each of August and December 2005, the administration substantially revised the EAR for exports of certain items to India, including the export or reexport of nu-

[4] Available at http://www.whitehouse.gov/news/releases/2004/01/20040112–1.html.

clear items which were unilaterally controlled by the United States for proliferation reasons. These were restricted to the "balance of plant" portions of facilities in India already under IAEA safeguards. These amended rules also removed several Indian entities from the Commerce Department's Entities List.[5] The amended regulations, however, did not affect items that were and are subject to NSG controls.

Thus, by early 2006, the administration had made a number of changes to U.S. regulations and policies for India. But those changes had brought the United States to the end of what could be done unilaterally. Additional changes to U.S. law would violate international controls, in particular those of the NSG. For any additional changes, particularly in respect of exports of nuclear materials, equipment and sensitive nuclear technology to India, agreement would be needed among the members of the NSG to permit such trade with India.

Since the enactment of the Nuclear Nonproliferation Act of 1978 (NNPA), it has been a requirement of U.S. law that, to continue nuclear supply to a non-nuclear weapon state (i.e., any state other than the five nuclear weapon states recognized by the NPT), "IAEA safeguards be maintained with respect to all nuclear materials in all peaceful nuclear activities within the territory of such state, under its jurisdiction, or carried out under its control anywhere."[6] This requirement, known as the "full-scope safeguards" provision, was also subsequently incorporated into the "Nuclear Suppliers Guidelines" at a meeting of the NSG in Warsaw, Poland, on April 3, 1992.[7] The committee notes that this requirement was achieved largely through the direct efforts of the United States. Under Secretary of State for International Security Affairs Reginald Bartholomew testified before the Subcommittee on Foreign Operations of the House Appropriations Committee on April 8, 1992 that:

> There has been significant progress over the past couple of years on a key nuclear export policy long supported by the U.S., i.e., requiring full-scope IAEA safeguards in non-nuclear-weapons states as a condition for any significant, new nuclear supply commitment. All 27 members of the Nuclear Suppliers Agreement issued a statement calling for full-scope safeguards as a condition of significant nuclear supply.[8]

The committee notes that another important U.S. goal was achieved at the 1992 Warsaw meeting, as well. In "recognition of the growing problems posed by the potential use of nuclear-related dual-use materials, equipment and technology in un-safeguarded nuclear programs or in nuclear weapons programs," the NSG decided to adopt "a comprehensive arrangement to control these items. . . . which consist[ed] of a set of guidelines and a list of

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[5] Supplement No. 4 to Part 744 to the EAR (15 C.F.R. Part 744, Supp. No. 4).

[6] At section 123.a(2) of the Atomic Energy Act of 1954 (42 USC 2153.a(2)).

[7] "Press Statement of the Nuclear Suppliers Meeting," Warsaw. Poland, April 3, 1992, available at http://www.nuclearsuppliersgroup.org/PRESS/1992-Press.pdf, hereinafter "Warsaw NSG Statement." The specific requirement rests at paragraph 4(a) of the NSG Guidelines for Nuclear Transfers, INFCIRC/254/Rev.8/Part I, and states that "Suppliers should transfer trigger list items or related technology to a non-nuclear-weapon State only when the receiving State has brought into force an agreement with the IAEA requiring the application of safeguards on all source and special fissionable material in its current and future peaceful activities."

[8] "Text of Statement Prepared for Delivery by Reginald Bartholomew, Under Secretary for International Security Affairs, U.S. Department of State, Before the Subcommittee on Foreign Operations of the House Appropriations Committee, Washington, DC," April 8, 1992, available on LexisNexis, hereinafter, "Bartholomew Statement."

some 65 items to be controlled . . . [which where] incorporated into the Nuclear Suppliers Guidelines."[9] The committee believes that the achievements of the United States at the 1992 Warsaw NSG meeting were substantial. They increased the strength of international nuclear export controls and extended to the international community the controls already embodied in U.S. law. The committee notes that the NSG has since grown to include more than 40 Participating Governments,[10] making the scope of its controls even more important. In addition, after enactment of the requirement for full-scope safeguards in U.S. law, many other countries specified this requirement in their own bilateral agreements and laws regarding international cooperation in atomic energy.

The requirement for full-scope safeguards in the NSG arose out of the 1990 Review Conference on the Nuclear Nonproliferation Treaty (NPT), which made important recommendations in respect of Article III of the NPT (which requires all non-nuclear weapon States Parties to accept IAEA safeguards and verification activities "with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices),"[11] one of which was "That nuclear supplier States require, as a necessary condition for the transfer of relevant nuclear supplies to non-nuclear weapon States, the acceptance of IAEA safeguards on all their current and future nuclear activities (i.e. full-scope safeguards or comprehensive safeguards)."[12]

Existing U.S. Law:

Section 123 of the Atomic Energy Act (42 U.S.C. 2153) requires an agreement for cooperation as a prerequisite for significant nuclear exports. The State Department, with the advice of the Department of Energy, negotiates such agreements, which spell out the terms, conditions, duration, nature, and scope of cooperation. The NNPA added a set of nine criteria to section 123 a. of the Atomic Energy Act (42 USC 2153(a)) which agreements for cooperation (called "peaceful nuclear cooperation agreements" and expected to meet.

These include guarantees that: (1) safeguards on nuclear material and equipment transferred continue in perpetuity; (2) full-scope safeguards are applied in non-nuclear weapon states; (3) nothing transferred is used for any nuclear explosive device or for any other military purpose; (4) the United States has the right to seek the return of exported items if the cooperating state detonates a nuclear explosive device or terminates or abrogates an IAEA

[9] Warsaw NSG Statement.

[10] The current Participating Governments are: Argentina, Australia, Austria, Belarus, Belgium, Brazil, Bulgaria, Canada, China, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Kazakhstan, the Republic of Korea, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Romania, the Russian Federation, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom, and the United States, at http://www.nuclearsuppliersgroup.org/member.htm.

[11] Treaty on the Nonproliferation of Nuclear Weapons, done at Washington, London and Moscow, July 1, 1968, and entered into force March 5, 1970 (21 USC 483) and in IAEA Information Circular (INFCIRC) 140, at http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc140.pdf.

[12] "Communication of 10 May 2005 received from the Government of Sweden on behalf of the participating Government of the Nuclear Suppliers Group," The Nuclear Suppliers Group: Its Origins, Roles and Activities, IAEA INFCIRC/539/Rev.3, 30 May 2005, available at http://www.nuclearsuppliersgroup.org/PDF/infcirc539r3.pdf.

safeguards agreement; (5) there is no transfer of material or classified data without U.S. consent; (6) physical security is maintained; (7) no enrichment or reprocessing of United States-origin nuclear materials and fuel may be done without prior U.S. approval; (8) storage must first be approved by the United States for plutonium and highly enriched uranium; and (9) anything subsequently produced through cooperation is subject to all of the above requirements.

If an agreement does not meet one or more of the requirements of Section 123 a., then the President presents the agreement to Congress as exempt from those requirements. Such an agreement cannot enter into force unless Congress passes a joint resolution of approval. In a case in which such an agreement was exempted because the recipient non-nuclear weapon state did not have full-scope safeguards, Congress could review one export license annually, and could, by enacting a resolution of disapproval, terminate exports for the remainder of that Congress under provisions of Section 128 (42 USC 2157).

The United States currently has about two dozen 123 agreements in force. A Section 123 agreement is presented to Congress, whereupon it is reviewed for 90 days of continuous session. If it meets all 9 criteria in Section 123 and Congress does not enact a resolution of disapproval of the agreement, the agreement enters into force. The Nuclear Regulatory Commission (NRC) reviews licenses for nuclear exports[13] according to the criteria of the Atomic Energy Act (AEA). If met, licenses are authorized, and if not, the President may authorize exports by executive order.[14]

The NNPA also included a provision for halting exports if a country were to test a nuclear device, violate safeguards agreements, proliferate to another non-nuclear weapon state, or continue nuclear weapons-related activities (now section 129 of the AEA (42 USC 2157)).

In order for the United States to be able to export nuclear fuel, reactors and sensitive technology to India, U.S. laws and policies, which served as the basis for international nuclear export controls, and those controls as well, would need to be modified to permit such commerce.

India's Separation Plan:

The administration stated that before changes in the law would be sought by the United States for India, India was to undertake certain of its commitments under the July 18, 2005 Joint Statement. The most important was the Indian promise to identify and separate its "civilian and military nuclear facilities and programs in a phased manner."[15] Under Secretary of State for Arms Control and International Security Robert G. Joseph testified before the committee on November 2, 2005:

> 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 non-

[13] 10 CFR 110, et seq.

[14] *See* CRS Report RL 33016, "U.S. Nuclear Cooperation with India: Issues for Congress," for further detail.

[15] See Joint Statement text in the annex to this report.

> proliferation 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.[16]

The administration did not specify what standards would be used by the United States to evaluate India's separation plan to establish that it is credible, transparent and defensible from a nonproliferation standpoint. The committee did receive testimony from the Honorable Ronald F. Lehman, the former Director of the U.S. Arms Control and Disarmament Agency, which put the present U.S.-Indian separation proposal in context:

> Over the years, various Indian interlocutors have floated the idea of separating civilian from military 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 U.S. and the international community. A token step would be counterproductive.[17]

With regard to the Indian Separation Plan which was presented by Prime Minister Singh in the Indian Parliament on March 2, 2006, Secretary of State Condoleezza Rice testified that it was indeed credible and defensible from a nonproliferation standpoint because:

> . . . it had to capture more than just a token number of Indian nuclear facilities, which it did by encompassing nearly two-thirds of India's current and planned thermal power reactors as well as all future civil thermal and breeder reactors. Importantly, for the safeguards to be meaningful, India had to commit to apply IAEA safeguards in perpetuity; it did so. Once a reactor is under IAEA safeguards, those safeguards will remain there permanently and on an unconditional basis. Further, in our view, the plan also needed to include upstream and downstream facilities associated with the safeguarded reactors to provide a true separation of civil and military programs. India committed to these steps, and we have concluded that its separation plan meets the criteria established: it is credible, transparent, and defensible from a nonproliferation standpoint.[18]

The committee has carefully reviewed the text of the March 2, 2006 Indian Government's Separation Plan and its further clarification of that document on May 6, 2006.[19] The committee commends India for placing additional facilities and materials under the IAEA safeguards system. Such actions can contribute to the ability of the IAEA to fulfill its mandate to better "apply safeguards, at the request of the parties, to any bilateral or multilateral arrangement, or at the request of a State, to any of that

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[16] Prepared Remarks of Robert G. Joseph, Under Secretary of State for Arms Control and International Security, at a hearing of the Senate Committee on Foreign Relations on "U.S.-Indian Nuclear Energy Cooperation: Security and Nonproliferation Implications," November 2, 2005, S. Hrg. 109–384, and available at http://foreign.senate.gov/testimony/2005/JosephTestimony051102.pdf. Hereinafter "November 2 Hearing."

[17] November 2 Hearing.

[18] "Questions for the Record Submitted to Secretary of State Condoleezza Rice by Chairman Richard G. Lugar, April 5, 2006," hereinafter "April 5 QFRs" *see* annex to this report.

[19] Both the March 2 and May 6 documents are appended to this report.

State's activities in the field of atomic energy."[20] The committee is also aware, however, of the general limitations that exist with respect to the implementation of the IAEA safeguards system. This stems from the fact that, like any large international organization with responsibilities around the globe, the IAEA has finite resources with which to tackle its many verification tasks, at both the physical and political levels, and in many countries where it is tasked with particularly significant and intense verification responsibilities, such as Iran, those activities can quickly absorb most of the available personnel and the necessary funds in the IAEA's Safeguards Division.

The committee's views regarding the IAEA and its safeguards system are contained in the report it made with its recommended resolution of ratification of the U.S. Additional Protocol to its Safeguards Agreement with the IAEA,[21] which the Senate passed on March 31, 2004.[22]

The limitations which apply generally to IAEA activities are further complicated by the fact that India has nuclear weapons and is not a State Party to the NPT. There is, therefore, little for the IAEA to discover in the way of diversion of nuclear materials to an undeclared nuclear weapons program, as in a non-nuclear weapon State Party to the NPT. Given that the IAEA is already faced with resource limitations in states where it has an absolute imperative to detect such diversion, the Agency has little to gain from closely monitoring India's civil nuclear facilities, rather, safeguards in India will be a favor to countries that engage in nuclear commerce with India, to help assure that their trade with India does not assist India's nuclear weapons program. The committee expects the administration to ensure that safeguards in India do not come at the expense of other IAEA safeguards activities.

India's March 2, 2006 separation plan has been criticized by many nonproliferation experts who have stated it does not constitute a true separation of civilian and military nuclear facilities.

On the question of how facilities were identified, India's separation documents provide few assurances. India's March separation document states, "Identification of purely civilian facilities and programmes that have no strategic implications poses a particular challenge" in India.[23] Instead, India identified its "overarching criterion" as whether "subjecting a facility to IAEA safeguards would impact adversely on India's national security." Moreover, facilities were excluded from the civilian list if they were located in a larger hub of strategic significance (e.g., the Bhabha Atomic Research Center (BARC)), even if they were not normally engaged in activities of strategic significance. In addition, the March document states that "Concepts such as grid connectivity are not relevant to the separation exercise,"[24] and that reactors would be connected to the electricity grid "irrespective of whether the reactor concerned is civilian or not civilian."[25] It is thus complicated to discern which

[20] Article III, paragraph 5 of the Statute of the Agency, available at http://www.iaea.org/About/statute—text.html.
[21] Senate Executive Report 108–12.
[22] Resolution of advice and consent to ratification agreed to in Senate by Division Vote. (5291)
[23] See annex to this report, hereinafter "March Separation Document."
[24] Ibid.
[25] Ibid.

reactors, facilities and materials in India are truly for civilian power production and which of them are truly for a weapons program.

India has stated that it will "include in the civilian list only those facilities offered for safeguards that, after separation, will no longer be engaged in activities of strategic significance."[26] It is difficult to tell whether this approach will place more facilities under safeguards in the future, or when such facilities might cease to be engaged in nuclear weapons activities, and presumably be available for placement under safeguards.

The administration has asserted that India's separation document captures the majority of India's nuclear complex by taking in "nearly two-thirds of India's current and planned thermal power reactors as well as all future civil thermal and breeder reactors."[27] While the committee commends India's efforts at separation, it remains concerned about the kinds of reactors which were not identified as civilian.

In the March 2 separation document, India said it would place 14 of India's 22 extant reactors under safeguards. India's present nuclear complex consists of three research reactors; many power reactors, including 15 operating reactors, with another eight under construction and three planned; two breeder reactors (one operating and one under construction); a single uranium enrichment facility; three spent fuel reprocessing facilities; six heavy water production plants; a uranium mining and processing complex, which includes three mines and two copper-mine tailing extraction units plus one mill for uranium ore, as well as numerous uranium conversion facilities; and three to four fuel fabrication plants.[28]

India did not identify the following facilities as civilian:

- 8 indigenous Indian power reactors (Kaiga 1, 2, 3, 4; MAPS 1, 2; TAPS 3, 4);
- the Fast Breeder test Reactor (FTBR) and the Prototype Fast Breeder Reactors (PFBR) under construction
- enrichment facilities;
- spent fuel reprocessing facilities (except for the existing safeguards on the Power Reactor Fuel Reprocessing (PREFRE) plant);
- research reactors—CIRUS (which will be shut down in 2010), Dhruva, Advanced Heavy Water Reactor;
- heavy water plants; nor
- various military-related plants (e.g., the prototype naval reactor).

India has not declared either of its breeder reactors to be civilian. Some U.S. experts have suggested that "power reactors, regardless

[26] Ibid.

[27] April 5 Hearing, hereinafter "April 5 Hearing," *see* annex to this report.

[28] See Sharon Squassoni, "India's Nuclear Separation Plan: Issues and Views," March 2, 2006, CRS Report For Congress, March 2, 2006, p. 8, hereinafter "Squassoni." *See also* "Questions and Answers in Parliament," Indian Department of Atomic Energy, Monsoon Session, 2003, available at http://www.dae.gov.in/parlqa/lokm03.pdf, which states "The Nuclear Power Corporation of India Ltd. (NPCIL) a Public Sector Undertaking, is responsible for the design, construction and operation of nuclear power reactors. There are fourteen (14) nuclear power reactors with a total nuclear power capacity of 2720 MWe in operation and 8 reactors are under construction in the country.

of their potential to produce plutonium for weapons, have a civilian use and should be declared as civilian and safeguarded, as well as their associated fuel fabrication and reprocessing and spent fuel storage facilities,"[29] particularly if they are intended to be used for peaceful purposes, and not as fissile material production centers. The fact that India did not decide to place its breeder reactors under safeguards has complicated the picture with regard to its having declared a majority of its program to be civilian since it appears to have excluded the second stage of its three-stage nuclear fuel cycle from safeguards. On April 5, 2006, Secretary Rice did not offer a specific reason for India's not having included its breeder program in its civilian declaration:

> Chairman LUGAR. What reason did India give for not declaring its extant 40 MWth Fast Breeder Test Reactor (FBTR) to be civilian?
>
> Secretary RICE. We cannot speak for the Government of India, of course, but in our discussions Indian officials argued that since the FBTR was still in the experimental stage, India not in a position to accept safeguards on the reactor at this time.
>
> Chairman LUGAR. What reason did India give for not declaring the 500 MWe fast breeder reactor it currently has under construction to be part of its civilian program?
>
> Secretary RICE. The reactor is not yet complete. India stated that it was not in a position to place reactors which it considers experimental under safeguards. India committed to placing all future civil power and breeder reactors under safeguards.[30]

The sizes and types of reactors under safeguards in India are directly related to the credibility of its separation plan, and the committee hopes that India will, in the future, place its breeder program under IAEA safeguards.

The committee's concerns regarding India's breeder program are magnified when it considers that India has announced its intention to build five 500MWe breeder reactors, none of which have been included in the separation plan as available for safeguards.[31] The committee also notes that it has been administration policy since 2002 to regard un-safeguarded stockpiles of plutonium as a danger to U.S. national security. As the 2002 National Strategy to Combat Weapons of Mass Destruction notes, "the United States will continue to discourage the worldwide accumulation of separated plutonium."[32] As Secretary Rice stated in answers to the committee, "The production of plutonium and other fuels as a byproduct of [a breeder] reactor's operation adds to the world net stock of potential fuel for a nuclear explosive device."

India's present nuclear fuel cycle consists of a three-stage process to produce and recycle plutonium and thorium as a reactor fuel, and to produce fissile materials for weapons:

> The first stage would rely on natural uranium-fueled reactors to make plutonium; the second stage would use that plutonium in fast reactors blanketed with thorium to produce U-233 (and more plutonium); and the third stage would use U-233 fuel and thorium fuel in fast reactors blanketed with thorium to produce more U-233 for use for future fuel. India

[29] Ibid., p. 14.
[30] April 5 QFRs.
[31] M.R. Srinivasan, R.B. Grover, S.A. Bhardwaj, "Nuclear Power in India: Winds of Change," Economic and Political Weekly, December 3, 2005.
[32] "National Strategy to Combat Weapons of Mass Destruction," in National Security Presidential Directive (NSPD) 17, December 2002, available at http://www.whitehouse.gov/news/releases/2002/12/WMDStrategy.pdf

> has not advanced beyond the first stage of the fuel cycle, aside from running a fast breeder test reactor (40 MWth Fast Breeder Test Reactor or FBTR) based on a French design and a small research reactor that uses U-233 fuel (Kamini).[33]

As the Secretary stated in answers to the committee, this process requires that "thorium . . . be converted into U-233 in a breeder reactor. The fuel cycle requires considerable handling of fissile material in the various loading, unloading, and transfers associated with the stages of the fuel cycle. Each time fissile material is handled, there is a risk of diversion." The committee believes that India's nuclear plans highlight the need for stringent security regarding all fissile material, and it urges the administration to share best practices in that regard with India.

Safeguards:

The effectiveness of a new safeguards agreement which India will negotiate with the IAEA is not yet known, and the text of India's March and May separation documents raises many questions. Secretary Rice stated before the committee on April 5, 2006, that "The safeguards required by this initiative are designed to help detect, and thereby help to prevent, the diversion to military use of any materials, technologies, or equipment provided to India's civil nuclear facilities."[34] The committee notes that IAEA safeguards, which combine nuclear material accountancy with inspections, generally apply only to nuclear materials, not to technology. Equipment supplied under a bilateral agreement can also be subject to a safeguards agreement, but the practice is to link the safeguards to the use of nuclear material with the equipment (versus constant safeguards). It is not clear whether the safeguards agreement will be a hybrid of existing approaches or something totally unique.

In November 2005, with respect to India's future safeguards agreement, Under Secretary Joseph wrote:

> 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] 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 . . . a safeguards agreement for India is to use INFCIRC/66, which is currently used at India's four safeguarded reactors.[35]

Paragraph 15.c of India's March separation document states that

> [A]n India-specific safeguards agreement will be negotiated between India and the IAEA providing for safeguards to guard against withdrawal of safeguarded nuclear material from civilian use at any time as well as providing for corrective measures that India may take to ensure uninterrupted oper-

[33] Squassoni, p. 4.

[34] "Remarks of Secretary of State Condoleezza Rice at the Senate Foreign Relations Committee on the U.S.-India Civil Nuclear Cooperation Initiative, April 5, 2006," *see* April 5 Hearing.

[35] November 2 Hearing.

ation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies.[36]

The committee is concerned by this language, as it implies that IAEA safeguards might not continue to apply to India's civil power reactors in the event of a cutoff of foreign fuel supply. The phrase "guard against withdrawal of safeguarded nuclear material from civilian use at any time" is is consistent with application of safeguards to material in perpetuity. However, the phrase "corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors" is troublesome because it suggests a more voluntary approach to safeguarding India's reactors than has been asserted by administration officials, including Secretary of State Rice. Other aspects of the separation plan are discussed in the committee's section-by-section analysis.

The committee notes that there is one area of separation where neither India's March nor its May documents mention anything—personnel. India's Department of Atomic Energy (DAE) employs some 50,000 personnel.[37] The Secretary of State noted in April 2006 that "While the specific issue of DAE personnel has not yet been discussed in detail, we would consider routine, frequent rotation of personnel between civil and military programs as being inconsistent with Indian commitments on separation,"[38] and that "We would consider the term "programs" to include both program-related activities and the personnel involved in those activities."[39] The committee hopes that as cooperation in atomic energy with India is implemented the Government of India will further clarify this aspect of separation.

II. Committee Action

The committee conducted an extensive review of the July 18, 2005 Joint Statement and its attendant results.

The committee met and received testimony from two panels on "United States-Indian Nuclear Energy Cooperation: Security and Nonproliferation Implications," on November 2, 2005. Witnesses for this hearing were: on the first panel, the Honorable R. Nicholas Burns, Under Secretary of State for Political Affairs, and the Honorable Robert G. Joseph, Under Secretary of State for Arms Control and International Security; on the second panel, the Honorable Ronald F. Lehman, II, Director, Center for Global Security Research, Lawrence Livermore National Laboratory, and formerly Director of the U.S. Arms Control and Disarmament Agency; the Honorable Ashton B. Carter, Co-Director of the Preventive Defense Project of Harvard's Kennedy School of Government and Stanford University, Ford Foundation Professor of Science and International Affairs at Harvard University's Belfer Center for Science and International Affairs, and formerly Assistant Secretary of Defense for International Security Policy; Henry D. Sokolski, Director of the Nonproliferation Policy Education Center, Washington, D.C.; and Michael Krepon, Co-Founder and President Emeritus of the Henry L. Stimson Center, Washington, DC.

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[36] See annex to this report.
[37] See http://www.dae.gov.in.
[38] April 5 Hearing.
[39] Ibid.

On March 16, 2006, Chairman Lugar introduced S. 2429, the administration's legislation to waive the application of certain requirements under the Atomic Energy Act of 1954 (42 USC 2011, et seq.) with respect to India. S. 2429 was referred to the committee on that day.

On March 29, 2006, the committee met in closed session for a briefing by the Honorable R. Nicholas Burns, Under Secretary of State for Political Affairs, and the Honorable Robert G. Joseph, Under Secretary of State for Arms Control and International Security, on "U.S.-India Atomic Energy Cooperation: The Indian Separation Plan and the Administration's Legislative Proposal."

On April 5, 2006, the committee met to receive testimony at a hearing with the Honorable Condoleezza Rice, Secretary of State, on "U.S.-India Atomic Energy Cooperation: The Indian Separation Plan and the Administration's Legislative Proposal."

On April 26, 2006, the committee met to receive testimony from two panels on "U.S.-India Atomic Energy Cooperation: Strategic and Nonproliferation Implications." On panel one, the committee heard testimony from The Honorable William J. Perry, Senior Fellow at the Hoover Institution, Stanford University, Stanford, CA, and formerly U.S. Secretary of Defense; The Honorable Robert L. Gallucci, Dean of the Edmund A. Walsh School of Foreign Service at Georgetown University, Washington, D.C., and formerly chief U.S. negotiator during the 1994 North Korean nuclear talks; the Honorable Ashton B. Carter, Co-Director of the Preventive Defense Project of Harvard's Kennedy School of Government and Stanford University, Ford Foundation Professor of Science and International Affairs at Harvard University's Belfer Center for Science and International Affairs, and formerly Assistant Secretary of Defense for International Security Policy; and Dr. Ashley J. Tellis, Senior Associate at the Carnegie Endowment for International Peace, Washington, D.C. On panel two, the committee heard testimony from the Honorable Ronald F. Lehman, II, Director, Center for Global Security Research, Lawrence Livermore National Laboratory, and formerly Director of the U.S. Arms Control and Disarmament Agency; The Honorable Robert J. Einhorn, Senior Adviser at the International Security Program of the Center for Strategic & International Studies, Washington, D.C., and formerly Assistant Secretary of State for Nonproliferation; Dr. Gary Milhollin, Director of the Wisconsin Project on Nuclear Arms Control, Washington, D.C.; and Dr. Stephen P. Cohen, Senior Fellow at the Foreign Policy Studies Program of the Brookings Institution, Washington, D.C.

At a business meeting on June 29, 2006, by a roll call vote of 16 in favor and 2 against (Voting in favor: Senators Lugar, Hagel, Chafee, Allen, Coleman, Voinovich, Alexander, Sununu, Murkowski, Martinez, Biden, Sarbanes, Dodd, Kerry, Nelson, and Obama; Voting against: Senators Feingold and Boxer), the committee ordered reported an original bill to exempt from certain requirements of the Atomic Energy Act of 1954 U.S. exports of nuclear materials, equipment and technology to India, and to implement the U.S. Additional Protocol. At the business meeting, the following members indicated that they wished to be cosponsors of the committee's legislation: Senators Lugar, Hagel, Chafee, Allen, Coleman, Voinovich, Alexander, Sununu, Murkowski, Martinez, Biden,

Dodd, Kerry, Nelson, and Obama. The committee agreed to an amendment by Senator Chafee by a voice vote, and agreed to an amendment by Senator Obama by a voice vote. An amendment by Senator Feingold failed by a roll call vote of 13 against and 5 in favor.

III. SUMMARY OF LEGISLATION

Chairman Lugar introduced S. 2429, the administration's India bill, by request, on March 15, 2006. The language of that bill is reproduced here, in full:

A BILL

To authorize the President to waive the application of certain requirements under the Atomic Energy Act of 1954 with respect to India.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. WAIVER AUTHORITY.

(a) WAIVER AUTHORITY.—Notwithstanding any other provision of law, if the President makes the determination described in subsection (b), the President may—

(1) exempt a proposed agreement for cooperation with India (arranged pursuant to section 123 of the Atomic Energy Act of 1954 (42 U.S.C. 2153)) from the requirement in section 123(a)(2) of the Atomic Energy Act of 1954, and such agreement for cooperation shall be subject to the same congressional review procedures under sections 123(b) and 123(d) of such Act as an agreement for cooperation that has not been exempted from any requirement contained in section 123(a) of such Act;

(2) waive the application of section 128 of the Atomic Energy Act of 1954 (42 U.S.C. 2157) with respect to India; and

(3) waive the application of any sanction under section 129 of the Atomic Energy Act of 1954 (42 U.S.C. 2158) with respect to India.

(b) DETERMINATION.—The determination referred to in subsection (a) is a determination by the President that the following actions have occurred:

(1) India has provided the United States and the International Atomic Energy Agency (IAEA) with a credible plan to separate civil and military facilities, materials, and programs, and has filed a declaration regarding its civil facilities with the IAEA.

(2) An agreement has entered into force between India and the IAEA requiring the application of safeguards in accordance with IAEA practices to India's civil nuclear facilities as declared in the plan described in paragraph (1).

(3) India and the IAEA are making satisfactory progress toward implementing an Additional Protocol that would apply to India's civil nuclear program.

(4) India is working with the United States for the conclusion of a multilateral Fissile Material Cutoff Treaty.

(5) India is supporting international efforts to prevent the spread of enrichment and reprocessing technology.

(6) India is ensuring that the necessary steps are being taken to secure nuclear materials and technology through the application of comprehensive export control legislation and regulations, and through harmonization and adherence to Missile Technology Control Regime (MTCR) and Nuclear Suppliers Group (NSG) guidelines.

(7) Supply to India by the United States under an agreement for cooperation arranged pursuant to section 123 of the Atomic Energy Act of 1954 is consistent with United States participation in the Nuclear Suppliers Group.

(c) REPORT.—Any determination pursuant to subsection (b) shall be reported to the Committee on Foreign Relations of the Senate and the Committee on International Relations of the House of Representatives, and such report shall describe the basis for the President's determination.

(d) SUBSEQUENT DETERMINATION.—A determination under subsection (b) shall not be effective if the President determines that India has detonated a nuclear explosive device after the date of enactment of this Act.

The committee examined the provisions of S. 2429 in detail, and found that, while containing a number of important provisions, which the committee retained in its own bill, S. 2429 lacked a number of important features the committee believes are necessary in a measure which would substantially change U.S. nuclear export control law and policy.

The bill reported by the committee, the United States-India Peaceful Atomic Energy Cooperation Act (hereinafter "the Act") would implement the President's policy as contained in the July 18, 2005 Joint Statement by providing a procedure under which certain provisions of the Atomic Energy Act of 1954 (AEA), as amended by the NNPA of 1978, will not be applicable to authorized exports or reexports to India of U.S.-origin nuclear fuel and sensitive nuclear technology. The committee retained, while slightly modifying, the determination requirements the President would need to meet to make use of the authority provided in the Act to make inapplicable those provisions of the AEA which are specified. The Act also would accomplish several other important goals, notably: to protect the Congress's oversight role, and to ensure that expanded U.S. civilian nuclear commerce with India will be implemented in a manner that maintains U.S. nonproliferation laws, policies, and regulations and that complies with U.S. obligations under the NPT. The committee supports an improved relationship with India, which it believes will not be hampered by including these modifications, which, in its view, are wholly consistent with the administration's policy and with long-standing policies of the United States.

Another important objective will be secured by the second title of the Act, which would provide needed authority to implement the U.S. Additional Protocol with the IAEA. This title is identical to S. 2489, the U.S. Additional Protocol Implementation Act, which the committee reported to the Senate on April 3, 2006. In view of the fact that signing and adhering to an additional protocol is one of the specific Indian commitments under the July 18, 2005 Joint Statement, the committee believes that it is in the national security and nonproliferation interests of the United States to ensure in this Act the U.S., too, meets this important nonproliferation commitment, which President Bush called on the Senate to meet in February 2004:

> I propose that by next year, only states that have signed the Additional Protocol be allowed to import equipment for their civilian nuclear programs. Nations that are serious about fighting proliferation will approve and implement the Additional Protocol. I've submitted the Additional Protocol to the Senate. I urge the Senate to consent immediately to its ratification.[40]

The Senate gave its advice and consent to ratification of the Additional Protocol on March 31, 2004, but the President cannot submit an instrument of ratification until Congress passes implementing legislation giving him authority to promulgate necessary regulations and the like.[41] Thus President Bush's challenge to the Senate, and to Congress as a whole, has not been met with nec-

[40] "President Announces New Measures to Counter the Threat of WMD," Remarks by the President on Weapons of Mass Destruction Proliferation, Fort Lesley J. McNair—National Defense University, Washington, D.C., February 11, 2004, available at http://www.whitehouse.gov/news/releases/2004/02/20040211–4.html, hereinafter, "NDU Speech."

[41] The provisions of S. 2489 are explained in the committee's Senate Report 109–226, filed on April 3, 2006.

essary action. Committee staff began discussions with the administration regarding implementing legislation in the spring and summer of 2004, and did not conclude those talks until early in 2006. Given the time that has now passed between Senate action in 2004 on the Additional Protocol itself, and its importance in such cases as Iran's nuclear activities, the committee finds ample reason to include the U.S. Additional Protocol Implementation Act with this measure.

TITLE I—UNITED STATES-INDIA PEACEFUL ATOMIC ENERGY COOPERATION

Title I contains the committee-recommended legislation to permit civilian nuclear energy cooperation between the United States and India.

Section 101

Sections 101, 102 and 103 set forth the short title, stipulate a Sense of Congress with six provisions relating to U.S.-Indian nuclear energy cooperation, and provide a declaration of policy that touches on nine important areas.

Section 101 provides that this title be cited as the "United States-India Peaceful Atomic Energy Cooperation Act."

Section 102

Section 102 contains a broad sense of Congress that covers six areas. Subsection (1) states that strong bilateral relations with India are in the national interest of the United States. Subsection (2) states that the United States and India share common democratic values and the potential for increasing and sustained economic engagement. Subsection (3) states that commerce in civil nuclear energy with India by the United States and other countries has the potential to benefit the people of all countries. The committee views these findings as underlying the effort to forge a new nuclear relationship with India.

Subsection (4) states that civil nuclear commerce with India represents a significant change in U.S. policy toward countries not parties to the NPT and stresses that the NPT remains the foundation of the international non-proliferation regime. Several later provisions of this Act are intended to maintain the effectiveness of the NPT and the overall non-proliferation regime. The first of these are subsections (5) and (6) of section 102.

Subsections (5) and (6) state that it is the sense of Congress that:

> (5) any commerce in civil nuclear energy with India by the United States and other countries must be achieved in a manner that minimizes the risk of nuclear proliferation or regional arms races and maximizes India's adherence to international non-proliferation regimes, including, in particular, the guidelines of the Nuclear Suppliers Group; and
>
> (6) the United States should not seek to facilitate or encourage the continuation of nuclear exports to India by any other party if such exports are terminated under United States law.

With regard to subsection (5), the committee commends the Government of India for issuing on February 1, 2006, its "Guidelines

for Nuclear Transfers (Exports)."[42] The committee further commends the Government of India for promulgating its WMD law, which was published in the summer of 2005. The committee notes that, while the administration has referred to that law as a part of India's commitments under both the Joint Statement and the NSSP, that law was passed during the May 2005 NPT Review Conference (before the July 18 Joint Statement) in fulfillment of India's obligation under U.N. Security Council Resolution 1540 (April 28, 2004). Similarly, Prime Minister Singh told the Indian parliament in August 2005 that there were no new Indian commitments contained in the July 18 Joint Statement, but only reaffirmations of positions established by the previous Indian government.[43] The committee believes that the implementation and enforcement of India's export controls will constitute, as it would for any nation, a true test of its adherence to the NSG and MTCR guidelines.

The task of minimizing the risk of regional arms races as a result of civil nuclear commerce will fall in large measure to the Government of India. Many critics have warned that this nuclear deal will permit, or even indirectly assist, India in producing more plutonium for its nuclear weapons program, and Indian officials have publicly stated that India will be able to produce as much fissile material for weapons purposes as it desires. At the same time, however, many have said that there is no reason why India would want to increase significantly its production of fissile material. The committee hopes that India will demonstrate needed restraint and not increase significantly its production of fissile material. If civil nuclear commerce were to be seen, some years from now, as having in fact contributed to India's nuclear weapons program, there could be severe consequences for the nuclear deal, for U.S.-Indian relations, and for the nuclear non-proliferation regime.

An amendment proposed by Senator Obama, and accepted by voice vote, added subsection (6) of section 102. It expresses the concern of Congress that sanctions imposed under U.S. law not be undermined by other countries. The committee is particularly concerned that the United States not facilitate or encourage the continuation of nuclear exports to India if U.S. exports were to be terminated pursuant to section 129 of the Atomic Energy Act of 1954 (42 USC 2157) because India had resumed nuclear testing, abrogated or materially violated a safeguards agreement, or engaged in nuclear proliferation. The committee certainly does not expect any such actions to occur, but it has a duty to maintain the integrity of U.S. law if its expectations were to prove incorrect.

Section 103

The Declaration of Policy provided in section 103 is particularly important, and several of the areas of policy highlighted in the provision are also addressed later in the Act.

Subsection (1) of section 103 states that it shall be the policy of the United States "to achieve as quickly as possible a cessation of the production by India and Pakistan of fissile materials for nu-

[42] No.AEA/27(1)/2005-ER, Government of India (Bharat Sarkar), Department of Atomic Energy (Parmanu Oorja Vibhag), Mumbai, the February 01, 2006, "Resolution: Subject: Guidelines for Nuclear Transfers (Exports)," available at http://www.dae.gov.in/sectt/im/gazfeb06.htm.

[43] August Reply.

clear weapons and other nuclear explosive devices." The administration has recently stated that "International pressure over a period of decades has had only marginal impact on the attitudes of India and Pakistan concerning nuclear weapons."[44] The committee believes, however, that it is incumbent upon the United States to encourage India and Pakistan to reduce tensions in the nuclear sphere, as well as in other areas.

India and Pakistan have espoused a policy to achieve a "minimum credible deterrent," and India reiterated in the July 18, 2005 Joint Statement its support for a Fissile Material Cutoff Treaty (FMCT). There are nevertheless reasons to ensure that as nuclear trade, in particular trade in nuclear fuel, to India from other nations increases, the United States elevates the priority it has placed on South Asian arms control and regional nonproliferation initiatives. Critics have argued that foreign provision of nuclear fuel to India will increase India's ability to produce plutonium for nuclear weapons, either directly or at least by increasing the overall availability of nuclear fuel for India's reactors and thereby reducing the opportunity costs of plutonium production. Whether they are accurate or not, the United States has a national security interest in ensuring that civil nuclear commerce with India does not lead to a nuclear arms race.

Secretary of State Rice testified before the committee that:

> . . . civil nuclear cooperation with India will not lead to an arms race in South Asia. Nothing we or any other potential international suppliers provide to India under this initiative will enhance its military capacity or add to its military stockpile. Moreover, the nuclear balance in the region is a function of the political and military situation in the region. We are far more likely to be able to influence those regional dynamics from a position of strong relations with India and, indeed, with Pakistan.[45]

The Secretary has also argued that:

> India would never accept a unilateral freeze or cap on its nuclear arsenal. We raised this with India, but India said that its plans and policies must take into account regional realities. No one can credibly assert that India would accept what would amount to an arms control agreement that did not include other key countries like China and Pakistan.[46]

The committee accepts the Secretary's comments, but likewise believes that given the need to avoid even misperceptions that could lead to an arms race, the United States must now use the influence it has gained through efforts in both India and Pakistan, and with India in particular through its nuclear trade with that nation, to help them transition from nuclear build-ups to stability and arms reductions. This is nowhere more relevant than in the area of fissile material production.

The Secretary also noted in testimony before the committee that "India's incentives or disincentives. . . . to grow its nuclear weapons program, its strategic program, are more related to the . . . political/military conditions in the region, than to any quantity of available nuclear material. And the program for India has been restrained over the number of years. I think most people would argue

[44] "Report on nuclear nonproliferation in South Asia for the period April 1, 2005 to March 31, 2006," June 26, 2006, report pursuant to section 620F(c) of the Foreign Assistance Act of 1961, as amended, PL 87–195.

[45] April 5 Hearing.

[46] Ibid.

that it's a relatively restrained, kind of, minimum-deterrent program."[47] The Secretary additionally answered that:

> India has some 50,000, give or take, tons of uranium available to it in its reserves, and it would need a very small percentage of that on the military nuclear side. . . . we do not believe that the absence of uranium is really the constraint on the nuclear weapons program. . . . the amount of fuel that one would need to run a civil program for years and years and years is far in excess of what India can mine indigenously. So, we think the incentives, or the crunch, if you will, is really on the civil side.[48]

While it is true that only a small amount of fissile material is required to make a nuclear weapon, the fact is that fissile materials can be used both for weapons and for reactor fuel. The Secretary is right to suggest that India faces a supply problem, particularly given its expectations for growing its nuclear power sector. While it would be difficult to establish a causal relation between U.S. or foreign exports to India and a consonant increase in India's fissile materials production for nuclear weapons, the committee believes that U.S. nuclear trade with India must not even be seen as leading to any increase in India's fissile material stockpile. The U.S. must work to end, both in South Asia and everywhere, the production of fissile materials for nuclear weapons and other nuclear explosive devices, and an increase in such production in India would only hinder such efforts.

Subsection (2) of section 103 states that it shall be the policy of the United States with respect to any peaceful atomic energy cooperation between the United States and India:

> to achieve as quickly as possible the Government of India's adherence to, and cooperation in, the full range of international non-proliferation regimes and activities, including India's—
>
> (A) full participation in the Proliferation Security Initiative;
>
> (B) formal commitment to the Statement of Interdiction Principles;
>
> (C) public announcement of its decision to conform its export control laws, regulations, and policies with the Australia Group and with the Guidelines, Procedures, Criteria, and Controls List of the Wassenaar Arrangement; and
>
> (D) demonstration of satisfactory progress toward implementing the decision described in subparagraph (C).

In his testimony before the committee in November 2005, Under Secretary Joseph stated that "In our ongoing dialogues, 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 the Wassenaar Arrangement."[49] Under Secretary Burns stated at a press briefing on March 16, 2006, that "India has also agreed to align itself with the other international regimes concerning proliferation—the Australia group, the Wassenaar arrangement."[50] The committee has seen no Indian statements, however, that would suggest any success in this regard.

While the committee notes India's commitments in the July 18, 2005 Joint Statement to "to secure nuclear materials and technology through comprehensive export control legislation and through harmonization and adherence to Missile Technology Con-

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[47] Ibid.

[48] April 5 Hearing.

[49] November 2 Hearing.

[50] "Ongoing Efforts To Implement the U.S.-India Civil Nuclear Agreement," press briefing by R. Nicholas Burns, Under Secretary of State for Political Affairs, March 16, 2006, available at http://www.state.gov/r/pa/prs/ps/2006/63270.htm.

trol Regime (MTCR) and Nuclear Suppliers Group (NSG) guidelines," it nevertheless believes that India should be similarly involved in other multilateral nonproliferation and export control regimes, including the Wassenaar Arrangement (WA) and the Australia Group (AG). The committee notes that even as the administration proceeded to implement the July 18, 2005 Joint Statement, and previously the NSSP, it sanctioned several Indian entities and persons for transfers of items to Iran under the authority of the Iran and Syria Nonproliferation Act (Public Law 106–178). On September 23, 2004, the administration sanctioned two Indian scientists for their activities in Iran,[51] Dr. R. C. Surendar and Dr. Y. S. R. Prasad, both of whom have extensive ties to India's nuclear power sector. On December 21, 2005,[52] the administration sanctioned Sabero Organic Chemicals Gujarat Ltd., and any successor, sub-unit, or subsidiary thereof, and Sandhya Organic Chemicals PVT Ltd., and any successor, sub-unit, or subsidiary thereof, both of India, and again, under the Iran and Syria Nonproliferation Act, for transfers of certain chemicals to Iran.

Reacting to the 2005 sanctions, the Government of India stated:

> We . . . have seen reports about imposition of sanctions on two Indian firms. . . . [and] the removal of sanctions on R. C. Surendar vindicates [the] Government's position on this matter. Since the imposition of sanctions in September 2004, [the Indian] Government has maintained that this had no justification. Accordingly, we had urged the U.S. Government to review the issue and withdraw the sanctions. The Government also reiterates that sanctions again Dr. Y.S.R Prasad should be removed. The sanctions imposed by the U.S. Government on the two Indian firms relate to transfer of some chemicals to Iran. Our preliminary assessment is that the transfer of such chemicals is not in violation of our regulations or our international obligations. [The] Government of India's commitment to prevent onward proliferation is second to none. We have instituted a rigorous system of export controls and our track record in this regard is well known. India is working with the international community including with the U.S. as a partner against proliferation. In this context the imposition of sanctions by the U.S. on our firms, which in our view have not acted in violation of our laws or regulations, is not justified.[53]

The December 2005 sanctions for chemical transfers to Iran were for exports of chemicals which are controlled on the control list of the Australia Group. The committee notes India's statement that such transfers to Iran were "not in violation of our regulations or our international obligations" and believes that the United States must therefore continue to work to ensure that India does not undertake such transfers in the future, to Iran or any other dangerous regimes. This could best be done by working with India to secure its adherence to the AG Guidelines. That would make India a full partner in world-wide non-proliferation efforts, rather than a country that holds back from assuming that responsibility.

Since India is now a producer of increasingly modern weapons systems, the committee believes that India should also bring its laws, regulations, and policies into conformity with the WA Guidelines. Joining the WA, or at a minimum adhering to Guidelines, is

[51] 69 FR 58212.
[52] 70 FR 77441.
[53] "MEA Official Spokesperson's reaction to news reports about imposition of sanctions on two Indian firms under the U.S.-Iran Proliferation Act," New Delhi, December 28, 2005, available at http://www.indianembassy.org/newsite/press—release/5.asp.

another commitment that most of the world's major powers have made, in the interests of world peace and stability.

The committee has been routinely assured that India would join the administration's Proliferation Security Initiative (PSI). In November 2005, Under Secretary Joseph informed the committee that:

> 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.[54]

Similarly, Secretary Rice stated in April 2006 that:

> India has stated that its participation remains under consideration. India committed in 2005 to participate in the PSI if it was able to join the Core Group of PSI participants that had developed and agreed to the PSI Statement of Principles, or if the Core Group was disbanded. In the summer of 2005, the United States and its partners in the Core Group agreed that the Core Group had served an important function in the process of starting up the PSI, but was no longer necessary and so was disbanded.
>
> More recently, India has linked its decision on PSI participation to its concerns with recently agreed amendments to the Convention on the Suppression of Unlawful Acts at Sea (the SUA Convention).
>
> The United States position is that endorsement of the PSI Statement of Interdiction Principles is a political commitment carrying no legal rights or obligations. Therefore, the United States does not accept India's linkage of the SUA Convention to the PSI. As the PSI is a voluntary initiative, India is free to choose to participate or not participate. We continue to discuss this issue with India and encourage India's participation.[55]

The committee believes that India should participate actively in the PSI. India's apparent reticence to join other countries in this activity is unfortunate given the key role India could play regarding interdiction efforts in and around its territory.

Subsections (3) and (4) of section 103 state that it shall be the policy of the United States with respect to any peaceful atomic energy cooperation between the United States and India:

> (3) to ensure that India remains in full compliance with its non-proliferation, arms control, and disarmament agreements, obligations, and commitments; [and]
>
> (4) to ensure that any safeguards agreement or additional protocol thereto to which India is a party with the International Atomic Energy Agency (IAEA) can reliably safeguard any export or reexport to India of any nuclear materials and equipment[.]

Compliance with all of India's non-proliferation commitments, including those in the July 18, 2005 Joint Statement and the safeguards agreements it is negotiating with the IAEA, will be essential to the implementation of the U.S.-India nuclear deal. The committee's policy concern in this regard leads later in the Act to significant reporting requirements in section 108. Equally important will be the assurance that IAEA safeguards provide against the diversion of foreign material, equipment or technology. The committee expects the administration to work diligently to ensure that India's agreements with the IAEA provide for both effective and

[54] November 2 Hearing.
[55] April 5 QFRs.

permanent safeguards. This will lessen any need for additional U.S. monitoring and will also provide a necessary level of assurance regarding other countries' nuclear exports to India.

Subsection (5) of section 103 makes it the policy of the United States to ensure that India meets all the requirements for nuclear cooperation laid out in section 123 a. of the Atomic Energy Act of 1954 (42 USC 2153), other than the requirement that India have full-scope safeguards.

Subsections (6) and (7) of section 103 are of critical importance to the committee. They make it the policy of the United States in nuclear trade with India:

> (6) to act in a manner fully consistent with the Guidelines for Nuclear Transfers and the Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Materials, Software and Related Technology developed by the multilateral Nuclear Suppliers Group (NSG) and the rules and practices regarding NSG decision-making; [and]
>
> (7) given the special sensitivity of equipment and technologies related to the enrichment of uranium, the reprocessing of spent nuclear fuel, and the production of heavy water, to work with members of the Nuclear Suppliers Group, individually and collectively, to further restrict the transfers of such equipment and technologies, including to India[.]

The Nuclear Suppliers Group, although not an organization that can issue binding directives, is nonetheless one of the most effective elements of the nuclear non-proliferation regime. For a generation, U.S. Presidents have forged in this forum an important international consensus on the need to prevent nuclear proliferation by controlling the export of sensitive nuclear material, equipment and technology. The committee believes strongly that no bilateral objective, even the important objective of a new relationship with India, should be allowed to undermine the NSG's effectiveness. The United States must continue to abide by the NSG Guidelines, which it has worked so diligently to achieve. Equally, the United States must maintain the consensus decision mechanism of the NSG, and not look for any way around that requirement. The committee was pleased by the Secretary of State's assurances in this regard at the committee's hearing on April 5, 2006.

The committee believes also that the United States must work with other nations to prevent the export of potentially harmful technologies. NSG Guidelines are not as strict as they ought to be regarding exports of enrichment and reprocessing equipment and technology, and the committee supports the administration's efforts to achieve consensus on tightening those Guidelines. In addition, the committee intends that the administration work with individual states to encourage them to refrain from sensitive exports.

Subsections (8) and (9) of section 103 make it the policy of the United States in nuclear trade with India:

> (8) to maintain the fullest possible international support for, adherence to, and compliance with the Nuclear Non-Proliferation Treaty; and
>
> (9) that exports of nuclear fuel to India should not contribute to, or in any way encourage, increases in the production by India of fissile material for non-civilian purposes.

Subsection (8) applies first and foremost to actions of the United States Government. In its implementation of civil nuclear commerce with India, the United States will have to take care to abide by Article I of the NPT, which requires each nuclear-weapon State

Party to the Treaty "not in any way to assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices."

Critics have argued that the sale of nuclear reactor fuel, by supplementing India's limited domestic supply of refined uranium ore, will enable India to avoid having to choose between using its domestic uranium for power generation or for plutonium production. In this way, they argue, such sales by the United States (or by any other nuclear weapon state) will necessarily assist indirectly India's nuclear weapons program and, thus, violate Article I of the NPT.

The administration rejects that argument and contends that India's plutonium production needs are a small proportion of its overall uranium requirements and, in any case, have always received first priority. The administration adds that India's safeguarded nuclear reactors have received foreign fuel several times in the years since India's first nuclear test, without it being alleged that such exports violated the NPT.

The committee accepts the administration's argument in terms of history, but cautions that the impact, if any, of civil nuclear commerce on India's nuclear weapons program is an empirical question that will require attention in the years to come. India does not appear to have had to choose between civil and military uses of its uranium until recently, if at all, yet some Indian officials have warned of the need for such trade-offs in coming years unless foreign reactor fuel can be obtained. If it should become evident that U.S. civil nuclear commerce with India is indirectly assisting India's nuclear weapons program by freeing up uranium for nuclear weapons purposes that would otherwise have been devoted to civil pursuits (or through technical transfer to India's unsafeguarded nuclear activities), then it would be incumbent upon the United States, under the NPT, to cease those contributing elements of its civil nuclear commerce with India. This requirement is stated more specifically in subparagraph (9) with respect to exports of nuclear reactor fuel to India. The requirement to cease any commerce that would otherwise violate Article I of the NPT is separate from and in addition to any requirements that might flow from other aspects of U.S. law, such as section 129 of the Atomic Energy Act of 1954.

Subsection 8 is meant also as a reminder of the need to maintain support for the NPT world-wide. The committee does not believe that civil nuclear commerce with India will undermine world-wide support for the NPT or for nuclear non-proliferation in general. The United States must exercise continued leadership, however, to avert any such impact. If the NPT is to remain effective, the United States must make clear through its own actions that nuclear non-proliferation applies across the board, and not merely with respect to governments that the United States dislikes. The United States must also work diligently to ensure that other countries live up to their NPT (and NSG) obligations.

Section 104

Section 104 of the committee's bill contains substantially the same waiver authority that the administration had requested from

provisions in the Atomic Energy Act for nuclear trade with India, with a few differences.

The existing and relevant provisions in the Atomic Energy Act—sections 123, 128 and 129—all have waiver or exemption authorities that could be used with respect to a future 123 agreement with India.

As stated above, S. 2429 contained a provision allowing the President to:

> . . . exempt a proposed agreement for cooperation with India (arranged pursuant to section 123 of the Atomic Energy Act of 1954 (42 U.S.C. 2153)) from the requirement in section 123(a)(2) of the Atomic Energy Act of 1954, and such agreement for cooperation shall be subject to the same congressional review procedures under sections 123(b) and 123(d) of such Act as an agreement for cooperation that has not been exempted from any requirement contained in section 123(a) of such Act. . . .

In explaining why the administration requested this authority, Secretary Rice stated that the desire was "to treat nuclear cooperation with India similar to nuclear cooperation with various other trading partners"[56] The Secretary also stated that:

> An additional factor involves the exception/waiver standard under Sections 123, 128, and 129 of the AEA. The existing standard is a determination by the Executive Branch that failure to make the proposed exception/waiver would be "seriously prejudicial to the achievement of United States nonproliferation objectives or otherwise jeopardize the common defense and security." In our view, the decision to facilitate nuclear cooperation with India should be based instead on the nonproliferation measures that India committed to in the Joint Statement, which are reflected in the required Presidential determination under subsection 1(b) of S. 2429.[57]

The committee notes that under existing law, an exempted agreement with India would require the affirmative assent of Congress before taking effect. At the time when such an exempt agreement is submitted to Congress, though, the President must determine that holding India to the statutory criteria would be "seriously prejudicial to achievement of United States non-proliferation objectives or otherwise jeopardize the common defense and security." The President apparently cannot make such a determination for India at the present time, thus the Secretary's answer above.

The committee concurs with the administration regarding the determination standard and the need for relief from the requirement. Instead of this rigid requirement, the committee's bill would allow the President to submit an exempt agreement with India without this determination. The committee notes, however, that while India's nonproliferation commitments are a basis for proceeding to cooperation in nuclear energy, the Act still requires the administration to coordinate and submit to Congress a Nuclear Proliferation Assessment (NPASS) under section 123. It is not clear that under the administration's proposed legislation an NPASS would be submitted to Congress.

The administration also provided another basis for its decision to seek legislative relief from parts of section 123. The Secretary stated that the administration's language:

> . . . takes into account the difficulty of putting into place all the pieces necessary for U.S.-India nuclear cooperation—particularly, the U.S.-India

[56] April 5 Hearing.
[57] Ibid.

> agreement for peaceful nuclear cooperation, the India-IAEA Safeguards Agreement, and Nuclear Suppliers Group action to accommodate nuclear trade with India—without knowing whether Congress, in the end, would support the Initiative and vote affirmatively to approve the agreement for peaceful nuclear cooperation. We believe it is important that Congress participate as a partner early in the process.[58]

The committee agrees that there are many aspects of nuclear cooperation with India which require negotiation and formal decisions, and it is pleased to demonstrate at an early stage congressional support in principle for the U.S.-India nuclear deal. Under S. 2429, however, Congress would have been "a partner early in the process," and only early in that process. Once a 123 agreement was submitted, Congress would have had only two options: enacting a resolution of disapproval (over a likely presidential veto); or allowing the agreement to enter into force after 90 days of continuous session. This procedure is followed under existing law only for 123 agreements that meet all the requirements of section 123 a. of the Atomic Energy Act. An agreement that does not meet the standards in section 123 a. cannot enter into force unless and until Congress passes a resolution of approval.

Congress has not seen the text of the 123 agreement with India (which has yet to be negotiated and submitted to it), the new safeguards agreement that India is negotiating with the IAEA, or an NSG decision to permit civil nuclear commerce with India (which must be adopted by consensus of the NSG's 45 Participating Governments). The committee believes that, in view of the many special circumstances surrounding the U.S.-India 123 agreement and the importance of the agreements and decisions that must still be promulgated, the United States is better served if Congress maintains its existing role regarding 123 agreements that do not meet the standards of section 123.

Subsection 104(b) provides that an agreement for cooperation exempted by the President under subsection (a)(1) shall be subject to the second proviso of subsection d. of section 123 of the Atomic Energy Act. The purpose of the provision is to make plain that any agreement for nuclear cooperation with India may not enter into force until Congress approves, and the President signs, a joint resolution stating that Congress favors the agreement.

Under current law, the President may waive any requirement of subsection a. of section 123 if he determines that inclusion of such requirement "would be seriously prejudicial to the achievement of United States non-proliferation objectives or otherwise jeopardize the common defense and security." Subsection 104(a)(1) of the committee's bill gives the President an alternative waiver authority: to exempt the proposed agreement with India from the requirement of section 123 a.(2) of the Atomic Energy Act, after submitting the determination specified in section 105 of the committee's bill. But the granting of this alternative authority does not alter or affect any other requirement of section 123, including the requirement that any agreement exempted from a requirement of subsection a. of section 123 be approved by Congress before it takes effect. Subsection (b) is designed to ensure that there is no legal ambiguity about the effect of subsection (a)(1).

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[58] Ibid.

Section 104(a)(2) is identical to the provision in section 1(a)(2) of S. 2429 regarding waiving the application of section 128 of the Atomic Energy Act with respect to India. Section 128 would have required that, as India will not maintain full-scope safeguards, the first license issued for any export to India be submitted to Congress for 60 days of continuous session, during which Congress could disapprove the export by joint resolution. Were Congress not to enact such a joint resolution, another export would have to be submitted to Congress a year later.

The committee finds that the application of section 128 would have achieved little in respect of true oversight, as enactment of a resolution of disapproval over a presidential veto would require a two-thirds vote in each house. The committee agrees with the administration, moreover, that the need to submit one export each year to Congress would inhibit U.S. companies in their efforts to obtain Indian contracts for nuclear equipment or fuel and to raise capital for major projects in India. The committee did include, in section 108, a provision requiring annual reporting on all nuclear export and re-export licenses to India.

Section 104(a)(3) would allow the President to waive the application of section 129 of the Atomic Energy Act with respect to India, but differently than the administration's proposed such waiver. S. 2429 would have allowed the President to "waive the application of any sanction under section 129 of the Atomic Energy Act of 1954 (42 U.S.C. 2158) with respect to India." The committee's recommended waiver authority is similar in effect to the waiver the administration requested in that it allows for nuclear cooperation with India in spite of India's weapons tests in 1974 and 1998 (129 (1)(A)), and its ongoing weapons activities (129 (1)(D)).

For other conduct that, under section 129, would result in termination of cooperation, section 129 would continue to apply. Thus, if India were to terminate or abrogate IAEA safeguards (129(1)(B)); materially violate IAEA safeguards (129(1)(C)); violate an agreement for cooperation with the United States (129(2)(A)); encourage a non-nuclear weapon state to engage in proliferation activities involving source and special nuclear material (129(2)(B)); or engage in unauthorized proliferation of reprocessing technology (129(2)(C)), the committee's bill would terminate cooperation. The administration's bill would have made section 129 inapplicable to such future actions on the part of India.

Section 104(a) also requires that the president submit the written determination and report contained in section 105 to the committee prior to his making use of the waivers in section 104.

Section 105

Section 105 specifies the terms of the determination that the President must make in order to take advantage of any of the waiver authorities afforded by section 104 of the Act. All of these requirements are rooted in the July 18, 2005 Joint Statement between President Bush and Indian Prime Minister Manmohan Singh. Section 105 provides that the determination shall be written, section 104 provides that it shall be submitted to the appropriate congressional committees (i.e., the Senate Foreign Relations Committee and the House International Relations Committee), and

section 105 provides that it shall be accompanied by a report to those committees. The committee intends that the report contain the President's justification for making each element of the determination.

Subsection (1) requires a presidential determination that India has provided to the IAEA and the United States a credible plan to separate its civil nuclear facilities, materials, and programs from its military facilities, materials, and programs. Credibility is a somewhat imprecise test, but it is one that the administration has used as a matter of policy and that it proposed for this element of the determination. The President must determine that India's separation plan is credible and provide a report on his reasons for that determination.

The committee notes that while the Government of India has proposed in the Lok Sabha (India's lower house of parliament) a separation plan relating to nuclear facilities, and while a logical application of that plan to nuclear materials would include all materials used in or produced by such facilities, two aspects of the Indian separation plan are less clear: how it will apply to the production of nuclear materials for use in civil nuclear facilities; and how civil nuclear programs (as opposed to merely the facilities and nuclear materials associated with them) will be separated from military ones. The second version of the separation plan proposed in the Lok Sabha includes a list of "upstream facilities" that are declared as civil, but the President must determine whether this list provides a credible separation between civil and military facilities and streams of material.

The President must also determine whether India has provided a credible plan for separation of its civil nuclear program from its military one. This requirement is rooted in the July 18, 2005 Joint Statement, in which India committed to "identifying and separating civilian and military nuclear facilities and programs." The committee notes that this could be a complicated enterprise, as the Government of India's separation plan states that grid connectivity will not determine whether a facility is civil or military and that an otherwise civil facility will be excluded from that list if it is located in a larger hub of strategic significance. This means that India's generation of electricity for civilian purposes will make use of both civil and military nuclear facilities. Some of its military reactors will be physically the same as its civil reactors, moreover, and there might be a temptation to use common personnel or logistics in the management and operation of those reactors. The committee believes, however, that a credible separation of nuclear programs would have to extend to such functions as management, operation, safety, personnel, finance and planning. The committee expects the President to examine these factors before determining that India has provided such a credible separation plan.

Subsection 2 requires a presidential determination that India has filed a complete declaration regarding its civil nuclear facilities and materials with the IAEA. The Government of India has changed its separation plan once already, adding additional facilities and specifying which reactors will be declared civilian facilities. The committee recognizes that the choice of facilities to declare as civilian is a decision for India to make, and it fully expects that additional

facilities will be added as India builds its civil nuclear power program. The word "complete" was included in subsection (2) not to imply finality in India's declaration, but rather to require the President to determine: (a) that the declaration is not in significant flux at the time of the determination; and (b) that India has not withheld from IAEA safeguards facilities that it has elsewhere declared as civilian.

Subsection (3) requires a presidential determination that:

> . . . an agreement between India and the IAEA requiring the application of safeguards in perpetuity in accordance with IAEA standards, principles, and practices to civil nuclear facilities, programs, and materials described in paragraph (2) has entered into force and the text of such agreement has been made available to the appropriate congressional committees.

This subsection requires that the text of the India-IAEA safeguards agreement "has been made available to the appropriate congressional committees" because the determination detailed in section 105 will likely be submitted just before a peaceful nuclear cooperation agreement is submitted to Congress. Congress will consider the safeguards agreement integral to a peaceful nuclear cooperation agreement with India, as the administration has stated that IAEA safeguards are intended "to help detect, and thereby help to prevent, the diversion to military use of any materials, technologies, or equipment provided to India's civil nuclear facilities."[59] In response to a Question for the Record from Chairman Lugar, Under Secretary Joseph stated: "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."[60]

Subsection (3) adds the words "in perpetuity" to the language proposed by the administration in section 1(b)(2) of S. 2429 because permanent safeguards are vital to any assurance that civil nuclear commerce with a facility will not assist India's nuclear weapons program. Safeguards in perpetuity are also key to not according India the status of a nuclear weapon state under the NPT, since only the NPT-recognized nuclear weapon states have heretofore been allowed to exclude (or selectively apply) the application of safeguards, in time or scope, to any facilities, materials and programs under their control. India will be allowed to determine which facilities are to be safeguarded, but will not be allowed later to remove those facilities from safeguards, as the recognized nuclear weapon states are permitted to do.

The requirement that the President determine that India's safeguards agreement is "in accord with IAEA standards, principles, and practices" was proposed by a former State Department official as a means of assuring that the agreement creates a credible safeguards regime for India's declared civil nuclear facilities.[61] The committee understands that India already has nuclear weapons and that no safeguards regime will keep India from maintaining or even increasing its stock of nuclear weapons. Article I of the NPT

[59] April 5 Hearing.
[60] November 2 Hearing.
[61] "The U.S.-Indian Civil Nuclear Deal," prepared testimony of Fred McGoldrick before the House International Relations Committee, May 11, 2006, page 7.

bars even indirect U.S. assistance to India's nuclear weapons program, however, so safeguards are needed to guard against any misuse of civil nuclear commerce for nuclear weapons purposes.

The separation plan proposed in its parliament by the Government of India speaks of "India-specific safeguards," a concept that has not been further defined. The administration assured the committee that the United States intends that India's safeguards be of the sort that the IAEA would normally institute pursuant to a safeguards agreement with a state that has not agreed to full-scope safeguards, e.g., of the sort commonly governed by IAEA Information Circular (INFCIRC/) 66. The committee intends that subsection (3) require the President to determine that India's safeguards do, in fact, conform to INFCIRC/66. The committee notes that this is consistent with India's intent to maintain its Tarapur Power Reactor Fuel Reprocessing Plant under safeguards "in the 'campaign' mode," i.e., under safeguards only when the plant is processing spent fuel from a safeguarded facility.

India's separation plan also speaks of a "safeguards agreement . . . providing for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies." This concept also has not been defined further. The committee does not intend that the President be able to make the determination in subsection (3) if India's safeguards agreement allows it to remove a reactor or storage site from safeguards in order to use unsafeguarded nuclear fuel in that reactor or storage site. Rather, any fuel that is used in a safeguarded facility should itself become safeguarded in perpetuity, as well as the resulting spent fuel or other byproducts.

Subsection (4) requires a presidential determination that India and the IAEA are making substantial progress toward implementing an Additional Protocol. The administration proposed a determination that they are making "satisfactory" progress, which the committee believes is too imprecise a test. The committee recognizes that Additional Protocol negotiations may not proceed in earnest until after the underlying safeguards agreement has been negotiated. As subsection (3) requires that the safeguards agreement has already entered into force, however, and as IAEA procedures for approval of safeguards agreements by its Board of Governors (BOG) generally impose a delay of several months between the completion of negotiations and entry into force, there should be ample time for negotiations on an Additional Protocol before the President will be in a position to submit the determination specified in this section of the Act. Subsection (4) does not require that India and the IAEA have completed negotiations on an Additional Protocol or already be implementing such Protocol. The committee intends the requirement of "substantial progress" to mean that negotiations are proceeding at a steady pace and that there is sufficient understanding of the language the Additional Protocol contains to be confident that the BOG will approve it.

Subsection (5) requires a presidential determination that India is working with the United States to conclude a multilateral treaty on the cessation of the production of fissile materials for use in nuclear weapons or other nuclear explosive devices. For many years, negotiation and conclusion of a Fissile Material Cut-off Treaty

(FMCT) has been a U.S. objective in the Conference on Disarmament (CD) in Geneva. The current administration has concluded that a verifiable FMCT is infeasible, however, and that the existing CD mandate to negotiate an effectively verifiable treaty is thus unacceptable. The CD has been unable to agree on a work program, moreover, as some other countries (notably China) have refused to approve the beginning of FMCT negotiations unless the CD also approved discussions of other issues, such as nuclear disarmament and banning weapons in outer space. Earlier this year, the United States presented a draft FMCT text and proposed a negotiating mandate that would not take a stand on whether the treaty need be verifiable.

India has long supported conclusion of an effectively verifiable FMCT. This position reflects India's concern regarding fissile material production by its nuclear-armed neighbors, and it would be unrealistic to expect a precipitous change in India's position. The committee does intend, however, that subsection (5) require India to continue its support for an FMCT and not to prevent adoption of a negotiating mandate that leaves the issue of verification to be decided in the negotiations.

Subsection (5) refers to a "treaty," rather than to the FMCT. The committee adopted this language to allow for the possibility of a multilateral treaty other than a universal FMCT. An agreement might be pursued, for example, among the 7 states known to have tested nuclear weapons or among the somewhat larger number known or believed to have produced nuclear weapons quantities of fissile material. If India were to work with the United States to conclude such a treaty, that would justify a presidential determination under subsection (5) even in the absence of FMCT efforts.

Subsection (6) requires a presidential determination that India is supporting international efforts to prevent the spread of enrichment and reprocessing technology to any state that does not already possess full-scale, functioning enrichment or reprocessing plants. India's commitment in the July 18, 2005 Joint Statement refers to "refraining from transfer of enrichment and reprocessing technologies to states that do not have them." The committee believes that the language of subsection (6), which is drawn from the President's speech to the National Defense University of February 11, 2004, more precisely describes U.S. policy objectives and will not present any difficulty for India.

Subsection (7) requires a presidential determination that:

> India has secured nuclear and other sensitive materials and technology through the application of comprehensive export control legislation and regulations, including through effective enforcement actions, and through harmonization of its control lists with, and adherence to, the guidelines of the Missile Technology Control Regime and the Nuclear Suppliers Group.

This language tracks closely India's commitment in the July 18, 2005 Joint Statement and section 1(b)(6) of the administration's proposed legislation. The committee added a reference to "effective enforcement actions" because it believes that laws and regulations go only so far. The real test is in implementation. The committee is confident that the Government of India will meet this test.

Subsection (8) requires a presidential determination that:

> . . . the Nuclear Suppliers Group has decided to permit civil nuclear commerce with India pursuant to a decision taken by the Nuclear Suppliers Group that—
>
> (A) was made by consensus; and
>
> (B) does not permit nuclear commerce with any non†nuclear weapon state other than India that does not have IAEA safeguards on all nuclear materials and all peaceful nuclear activities within the territory of such state, under its jurisdiction, or carried out under its control anywhere.

The Nuclear Suppliers Group, with consistent American leadership over a generation, has played a major role in combating nuclear proliferation by encouraging states not to export nuclear technology, equipment and materials to non-nuclear weapon states without strong safeguards against misuse of those exports. The committee believes strongly that it is critical to maintain the vitality and effectiveness of the NSG. This could be a challenge as the United States seeks an exception to the Guidelines for exports to India that will differ from the current NSG requirement for full-scope safeguards.

The NSG, like many international organizations, makes decisions by consensus, rather than through a formal vote. Consensus decisions by the NSG's Participating Governments have strengthened international nuclear export controls and provided a forum in which the decisions of those governments to export nuclear materials and equipment are examined in light of the NSG Guidelines.

The committee is concerned that some Participating Governments may enter into nuclear commerce with India that does not reflect rules laid out in the NSG Guidelines or that such export decisions may not reflect agreement among supplier states regarding whether India has met or is meeting its nonproliferation obligations and commitments, including those in the July 18, 2005 Joint Statement.

One important means to maintain the role and effectiveness of the NSG will be to change the rules for India only in accordance with the NSG Guidelines and its procedures for such changes. Paragraph 17 of those Guidelines states: "Unanimous consent is required for any changes in these Guidelines."[62] Subsection (8) therefore requires that the NSG decision regarding India be "made by consensus." This is consistent with the intent of the administration, as indicated in a response by Secretary Rice to a Question for the Record from the Chairman, in which she refers to actions "after a consensus decision is reached by the NSG to accommodate civil nuclear cooperation with India."[63]

Likewise, the committee desires that the decisions of NSG Participating Governments regarding nuclear exports to India, or to any other nation be consistent with the consultative and nonproliferation commitments made by such states, in particular for any exports in "sensitive cases," as noted in the "Consultations" provisions at paragraph 16(b) of the NSG Guidelines.

The NSG's decision on India should not erode its ability to maintain its basic Guidelines. Subsection (8)(B) is included, therefore, to ensure that the President must determine that the decision does not have the practical effect of permitting nuclear exports to other

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[62] *Note verbale* to the IAEA, INFCIRC/254/Rev.8/Part 1, February 2006, available at http://www.iaea.org/Publications/Documents/Infcircs/2006/infcirc254r8p1.pdf.

[63] April 5 Hearing.

states without full-scope safeguards, even if it is worded in a manner that does not specify that such exports to India are acceptable.

Section 106

Section 106 generally prohibits the transfer to India of enrichment, reprocessing, and heavy-water technologies. It allows such items to be sent to India only as part of efforts aimed at making such technologies proliferation-resistant, such as under the administration's Global Nuclear Energy Partnership (GNEP)[64] or under an international fuel-cycle project approved by the IAEA. The provision is consistent with the administration's policy regarding the proliferation of enrichment and reprocessing (ENR) technologies and with the answers the committee received from various administration officials regarding their policy with respect to such transfers to India.

The committee believes that section 106 is necessary to ensure that no sensitive nuclear technologies related to the enrichment of uranium (which can be used to make highly-enriched uranium for weapons), the reprocessing of spent nuclear fuel (which can provide plutonium for weapons), or the production of heavy water (heavy water-moderated reactors produce weapons-grade plutonium and tritium as a byproduct) are given to India, unless under international cooperation or as special, proliferation-resistant versions of these dual-use technologies.

India currently produces heavy water, operates heavy-water moderated reactors, reprocesses spent nuclear fuel and has a limited uranium enrichment capability. Only a portion of India's facilities will be under IAEA safeguards, and sensitive nuclear technologies will reside in India in both safeguarded and un-safeguarded facilities. Consequently, the committee desires to ensure that the United States does not provide, even inadvertently, assistance to India that could further India's development of these technologies for non-civilian purposes. Such assistance could be viewed as a violation of U.S. obligations under Article I of the NPT.

Subsection (a) provides a Sense of Congress on licensing policy that would apply generally to all exports and reexports authorized under 10 CFR Part 110 by the Nuclear Regulatory Commission (NRC) and under 10 CFR Part 810 by the Secretary of Energy. The provision states the sense of Congress that it is in the interest of the United States to permit the timely consideration of such license applications for the export and reexport to India of any nuclear materials and sensitive nuclear technology requiring such authorizations, to the extent that such exports and reexports are consistent with United States laws, regulations, and policies in effect at the time such export or reexport applications are to be considered. The committee intends that this provision not result in any change to the process that is required within the interagency for such licenses—procedures which were mandated in the NNPA.[65]

Subsection (b)(1) would prohibit the export or reexport to India of any equipment, materials, or technology related to the enrichment of uranium, the reprocessing of spent nuclear fuel, or to the

[64] http://www.gnep.energy.gov/

[65] See Title III of Public Law 95–242, "Export Organizations and Criteria," (42 USC 2155a et seq.).

production of heavy water. With respect to enrichment, materials, equipment and technology that are used for separating the isotopes of uranium or enriching uranium in the isotope 235 may not be exported to India, and no equipment or device, nor any important component or part especially designed for such equipment or such a device, may be exported to India, except as provided under subsection 106(b)(2). With respect to reprocessing, the provision would bar similar transfers to India of materials, equipment and technology that are particularly useful for the separation of actinides in spent nuclear fuel.

The committee does not intend that the provision bar, in any manner, the export of reactor fuel to India, and does not interpret the inclusion of the term "materials" to prohibit such transfers.

The prohibition is balanced with a narrow exception providing that such materials, equipment and technology may be approved to be exported or reexported to India if the end user:

> (i) is a multinational facility participating in an IAEA-approved program to provide alternatives to national fuel cycle capabilities; or
>
> (ii) is a facility participating in, and the export or reexport is associated with, a bilateral or multinational program to develop a proliferation-resistant fuel cycle; and
>
> (B) the President determines that the export or reexport will not improve India's ability to produce nuclear weapons or fissile material for military uses.

On February 11, 2004, the President stated his policy: "The 40 nations of the Nuclear Suppliers Group should refuse to sell enrichment and reprocessing equipment and technologies to any state that does not already possess full-scale, functioning enrichment and reprocessing plants."[66] The President also noted that "enrichment and reprocessing are not necessary for nations seeking to harness nuclear energy for peaceful purposes."[67] This is particularly true in the case of India and its potential use of enrichment technology. India has developed its nuclear fuel cycle around the use of natural uranium in heavy water reactors. For its few foreign-built light water reactors, India relies on foreign-supplied fuel, currently provided by Russia. The committee believes that enrichment technology transfers would most likely serve either to improve India's ability to enrich fuel for military purposes (as fuel for submarine reactors) or to create more sophisticated nuclear weapons.

The administration also stated, in answers to the committee's questions, that it would not give enrichment, reprocessing or heavy-water technology to India. For example, in response to a Question for the Record in November 2005, Under Secretary Joseph clarified the meaning of the phrase "full civil nuclear energy" in the July 18 Joint Statement:

> Chairman LUGAR. 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?
>
> Under Secretary JOSEPH. 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

[66] NDU Speech.
[67] Ibid.

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.[68]

Furthermore, both Under Secretary Joseph and Under Secretary Burns stated that the United States would not export enrichment and reprocessing to India:

Chairman LUGAR. 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?

Under Secretaries BURNS and JOSEPH. We cannot say precisely which nuclear technologies the U.S. (or other suppliers) would export to India, except that we would exclude reprocessing and enrichment technologies from our list.[69]

Chairman Lugar also sought the administration's view of a provision in legislation that would prohibit such technologies from being exported to India:

Chairman LUGAR. Could you please provide me with your views with regard to [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[?]

Under Secretary JOSEPH. 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.[70]

The committee notes that Under Secretary Joseph's answer did not oppose inclusion of such a provision in law.

Regarding heavy-water production technologies, the Chairman sought further clarification from Secretary Rice in April 2006:

Chairman LUGAR. Has the administration determined whether or not heavy water could be exported to India from the United States?

Secretary RICE. The U.S. does not foresee transferring heavy water production equipment or technology to India, and the draft bilateral peaceful nuclear cooperation agreement accordingly makes no provisions for such transfers.[71]

Thus, it was clearly stated, without any qualifications or reservations, that the United States would not export such technologies to India.

The committee believes that section 106 would not inhibit, in any way, India's full participation in GNEP. As Secretary Rice stated:

U.S. negotiators told India that India's decision not to designate its fast breeder reactors and associated fuel cycle research and development facilities as civil and place those facilities under IAEA safeguards would preclude our ability to collaborate on issues related to the fast burner reactors contemplated under GNEP at this time. If India places breeder reactors under safeguards in the future, the United States has indicated that, as ap-

[68] November 2 Hearing.
[69] Ibid.
[70] Ibid.
[71] April 5 QFRs.

propriate, it is willing to explore potential areas for civil cooperation in this context.[72]

Section 107

Section 107 of the Act contains broad requirements for an end-use monitoring program to be carried out with respect to U.S. exports and re-exports of nuclear materials, equipment, and technology sold, leased, exported, or reexported to India.

Such a program can provide increased confidence in India's separation of its civilian from its military nuclear programs, facilities, materials and personnel, and also would further ensure United States compliance with Article I of the NPT. The provision, though, is not intended to ensure U.S. compliance, nor is it intended to reflect poorly on India's July 18, 2005 Joint Statement commitments and its March and May 2006 separation documents. Rather, the committee believes that the resulting and regular cooperation between U.S. regulatory agencies, in particular with the NRC, can provide a basis for even greater cooperation between the two nations.

Section 107 provides a large degree of flexibility to the President. Paragraphs 107(b)(1) and (2) require sufficient measures to ensure that all the assurances and conditions of any licenses issued for exports and reexports to India by the NRC under 10 CFR Part 110, and by the Secretary of Energy pursuant to 10 CFR Part 810, are being met and complied with in India. Paragraph 107 (b)(2) would require that, with respect to any authorizations issued by the Secretary of Energy pursuant to section 57 b. of the Atomic Energy Act (42 USC 2077(b)),

> (A) the identified recipients of the nuclear technology are authorized to receive the nuclear technology;
>
> (B) the nuclear technology identified for transfer will be used only for peaceful safeguarded nuclear activities and will not be used for any military or nuclear explosive purpose; and
>
> (C) the nuclear technology identified for transfer will not be retransferred without the prior consent of the United States, and facilities, equipment, or materials derived through the use of transferred technology will not be transferred without the prior consent of the United States.

The committee notes that much of what is required by section 107 is already in place. Thus, there are provisions in the applicable regulations (10 CFR Part 110) dealing with end use assurances and certain diligence requirements on the applicant in situations having significant implications for public health and safety or the common defense and security. There are also reporting and information requirements in export or re-export authorizations.

10 CFR Part 110.2 adds that section 123 agreements may require:

> an exchange of information on imports, exports, [and] retransfers with foreign governments, peaceful end-use assurances, and other conditions placed on the transfer of the material or equipment.[73]

Similarly, both 10 CFR Part 810.6 and section 57 b. of the Atomic Energy Act stipulate that the Secretary of Energy must grant specific approval for certain activities, in particular those involving

[72] April 5 QFRs.
[73] 10 CFR 110.2.

the production of special nuclear material outside the United States.[74]

For authorizations of transfers and retransfers to India of U.S.-origin nuclear materials, equipment and technology, and in particular any sensitive nuclear technology, to India the committee believes that there is a special need for a program to ensure, as a requirement for all relevant U.S. regulatory agencies, that the conditions that relate to the scope of authorized activities and approved end users, under any form of authorization issued by such agencies, are met and recorded.

These requirements could be met by implementing those measures already applied in respect of U.S.-China atomic energy cooperation under the 123 agreement with China.[75] These requirements have resulted in record-keeping requirements, in particular for sensitive nuclear technology, to which IAEA safeguards would not apply.

Under Secretary Joseph testified before the committee that while the 123 agreement with India will not provide for full-scope safeguards, it "will allow for appropriate controls to help ensure that material or goods provided for civilian purposes remain within the civilian sector."[76] The committee is aware that for many years as a result of the enactment of section 123 a.(1) of the AEA, the United States has required that safeguards be maintained on U.S.-origin items exported to the cooperating party, even in the event that the IAEA cannot do so. This requirement for bilateral or "fall-back" safeguards enables such safeguards to truly exist in perpetuity. While the committee accepts that both IAEA and fall-back safeguards could safeguard nuclear materials in India's civilian program, there is no legal requirement for the IAEA to safeguard anything other than nuclear materials. Paragraphs 107(b)(3)(A) to (C) are designed to ensure that end-use monitoring under fall-back safeguards would continue for U.S.-origin items.

Section 108

Section 108 requires the President to provide important information to the Senate Foreign Relations Committee and the House International Relations Committee regarding the Government of India's fulfillment of its non-proliferation commitments. The committee commonly includes such requirements when it recommends approval of non-proliferation agreements.

Subsection (a) of section 108 requires the President to keep the committees fully and currently informed of:

> (1) any material non-compliance on the part of the Government of India with—
>
> (A) the non-proliferation commitments undertaken in the Joint Statement of July 18, 2005, between the President of the United States and the Prime Minister of India;
>
> (B) the separation plan presented in the national parliament of India on March 7, 2006, and in greater detail on May 11, 2006;
>
> (C) a safeguards agreement between the Government of India and the IAEA;
>
> (D) an Additional Protocol between the Government of India and the IAEA;

[74] *See also* 10 CFR 810.7 and 810.8.
[75] Approved in Public Law 99–183 of December 16, 1985.
[76] November 2 Hearing.

(E) a peaceful nuclear cooperation agreement between the Government of India and the United States Government pursuant to section 123 of the Atomic Energy Act of 1954 (42 U.S.C. 2153) or any subsequent arrangement under section 131 of such Act (42 U.S.C. 2160);

(F) the terms and conditions of any approved licenses; and

(G) United States laws and regulations regarding the export or reexport of nuclear material or dual-use material, equipment, or technology;

(2) the construction of a nuclear facility in India after the date of the enactment of this Act;

(3) significant changes in the production by India of nuclear weapons or in the types or amounts of fissile material produced; and

(4) changes in the purpose or operational status of any unsafeguarded nuclear fuel cycle activities in India.

Most of the reporting required by paragraph (a)(1) would relate to any material violation of India's nuclear non-proliferation commitments. The committee certainly does not expect any such material violations to occur, but were there such a violation would be of serious concern and the two committees should be informed promptly. In some cases, such an occurrence would also trigger the termination of nuclear exports pursuant to section 129 of the Atomic Energy Act of 1954.

Subparagraph (a)(1)(G) relates not to an Indian non-proliferation commitment, but rather to compliance with U.S. laws and regulations. Some experts have cited reasons to believe that the Government of India engages in covert procurement for its nuclear weapons program. If India were to do that in violation of U.S. laws and regulations, such activity would be of serious concern to the committee and would call into question the new bilateral relationship that underlies any agreement to resume civil nuclear commerce with India.

Paragraphs (a)(2)–(4) relate to India's nuclear facilities under its separation plan and in a world where civil nuclear commerce with India is permitted. As India builds new nuclear facilities, the committee will want to be made aware of those facilities so that it can monitor their eventual use and whether they are declared as civil nuclear facilities. The committee does not expect frequent information on long-term construction projects, but does expect to be informed promptly when the United States learns about such projects and to be updated occasionally regarding their status.

The committee will also want to be kept abreast of changes in India's use of its non-declared facilities. The Government of India's decision not to declare a nuclear facility as a civil facility does not necessarily mean that it will be used for military purposes. Indian officials made clear, in describing its separation plan, that India had excluded some power generation facilities merely because they were located in proximity to military facilities or because they represented advanced technology efforts that could eventually be used for either civil or military purposes. The actual use of non-declared nuclear facilities will be a matter of continuing interest to the committee. So will any changes in India's production of nuclear weapons or of fissile materials for military purposes. As noted earlier, the committee hopes that India will continue to exercise great restraint in its nuclear weapons program, looking to a day when India and its nuclear-armed neighbors can agree to stabilize or reduce their nuclear arsenals. If India were to significantly increase its nuclear weapons or fissile materials production, then the com-

mittee might well question whether civil nuclear commerce with India had become inimical to regional security and U.S. national security.

Subsection (b) of section 108 requires the President to report annually to the committees regarding implementation of civil nuclear commerce with India and the Government of India's compliance with its non-proliferation commitments. The first report shall be submitted not later than 180 days after a peaceful nuclear cooperation agreement between the United States and India enters into force.

Paragraph (b)(1) requires a description of any additional nuclear facilities and nuclear materials that the Government of India has placed or intends to place under IAEA safeguards. The Secretary of State testified to the committee on April 5, 2006, that "India has agreed to place all future civil reactors—both breeder and thermal—under permanent International Atomic Energy Agency (IAEA) safeguards" and that up to 90 percent of India's reactors could be under safeguards in 15 years. At the same time, Indian officials have emphasized that all decisions regarding future reactors are for the Government of India to make and that, at least initially, no breeder reactors will be declared as civil nuclear facilities. The committee hopes that the availability of foreign reactor technology and nuclear fuel will lead India to put more and more reactors under permanent IAEA safeguards—including breeder reactors.

Paragraph (b)(2) requires a listing of, and various information on, each license or other authorization for the export or reexport to India of nuclear materials and equipment. The committee understands that the data required by this paragraph are already collected routinely by the agencies that license nuclear exports.

Paragraph (b)(3) requires that the annual report include:

> . . . any significant nuclear commerce between India and other countries, including any such trade that—
>
> (A) does not comply with applicable guidelines or decisions of the Nuclear Suppliers Group; or
>
> (B) would not meet the standards applied to exports or reexports of such material, equipment, or technology of United States origin.

Administration officials have told the committee that although the United States will maintain its non-proliferation policies in its licensing decisions regarding exports or reexports to India, not all of those standards will be imposed by the Nuclear Suppliers Group regarding civil nuclear commerce with India. In particular, the administration says that the NSG will not require other countries to refrain from exporting equipment or technology relating to uranium enrichment or spent fuel reprocessing. NSG Guidelines are not formal requirements, moreover, so much as recommendations that NSG members and adherents are expected either to honor or to overrule only after consulting with other NSG members.

As discussed in the summary of section 103, the committee believes that the United States should encourage other countries not to engage in especially sensitive exports to India, such as those relating to uranium enrichment or spent fuel reprocessing. The committee will be especially interested to learn, therefore, whether other countries are honoring the NSG Guidelines and whether they

are approving exports to India that the United States would not have approved.

Subparagraph (b)(4)(A) calls upon the President to certify, in this annual report, that India is in full compliance with its non-proliferation commitments and obligations, i.e., with its pledges cited in subparagraphs (A) through (F) of subsection (a)(1). The committee expects that the President will be able to make that annual certification.

If the President cannot make the certification required in subparagraph (b)(4)(A), then subparagraph (b)(4)(B) requires the President to provide:

> . . . an identification and assessment of all compliance issues arising with regard to the adherence by India to its commitments and obligations, including—
>
> (i) the steps the United States Government has taken to remedy or otherwise respond to such compliance issues;
>
> (ii) the responses of the Government of India to such steps; and
>
> (iii) an assessment of the implications of any continued noncompliance, including whether nuclear commerce with India, if not already terminated under section 129 of the Atomic Energy Act of 1954 (42 U.S.C. 2158), remains in the national security interest of the United States.

As noted above, the committee does not expect that subparagraph (b)(4)(B) will ever have to be invoked. If that should occur, however, the committee will consider it a matter of utmost gravity. The decision to resume civil nuclear commerce with India is based upon America's trust that the Government of India will be fully committed to the cause of non-proliferation, despite the fact that it remains outside the NPT. Were that trust to be violated in a material way, the committee would have to ask itself, just as subparagraph (iii) asks the President, whether nuclear commerce with India remained in the national security interest of the United States.

Paragraph (b)(5) requires that the annual report include a detailed description of:

> (A) United States efforts to promote national or regional progress by India and Pakistan in disclosing, securing, capping, and reducing their fissile material stockpiles, pending creation of a world-wide fissile material cut-off regime, including the institution of a Fissile Material Cut-off Treaty;
>
> (B) the reactions of India and Pakistan to such efforts; and
>
> (C) assistance that the United States is providing, or would be able to provide, to India and Pakistan to promote the objectives in subparagraph (A), consistent with its obligations under international law and existing agreements.

The committee believes strongly that the United States has a national security interest in ensuring that India and Pakistan's nuclear weapons are never used, and that their fissile material stockpiles remain secure from diversion and eventually are stabilized and then reduced. The committee urges the administration to make this a high and continuing priority, even in the absence of a Fissile Material Cut-off Treaty. The intent of the committee in mandating an annual report on U.S. efforts, including a description of assistance that the United States is prepared to offer to India and Pakistan (consistent with its NPT and other obligations), is to encourage sustained and creative approaches to achieving this important objective.

Paragraph (b)(6) requires that the annual report include a description of U.S. efforts and progress toward the objective of achieving India's full participation in the Proliferation Security Initiative (PSI), formal commitment to the PSI Statement of Interdiction Principles, public announcement of its decision to conform its export control laws, regulations, and policies with the Australia Group and with the Guidelines, Procedures, Criteria, and Controls List of the Wassenaar Arrangement, and demonstration of satisfactory progress toward implementing that decision. The administration has assured the committee that it shares this objective and is pursuing it.

The intent of the committee in mandating an annual report on U.S. efforts is to maintain attention to the objective that India become a participant in, or adherent to, the full range of non-proliferation regimes is that, were India to participate in the PSI and adhere to the Australia Group and Wassenaar Arrangement Guidelines, it would demonstrate—and receive due credit for—having the same broad commitment to non-proliferation that other advanced states have undertaken.

Subsection (c) of section 108 permits the annual report, after the initial report, to be submitted with an existing annual report on proliferation prevention. It also permits the President to submit the information required by paragraph (b)(5) with an existing annual report on progress toward South Asian regional non-proliferation. The committee's intent is to provide options to the Executive branch, not to dictate how the annual report will be submitted. The President may continue to submit a separate annual report, put it in the proliferation prevention report, or submit most of it in one of those ways and place the information required in paragraph (b)(5) in the South Asian non-proliferation report.

Subsection (d) of section 108 requires that each report submitted under this section be submitted in unclassified form, but allows for a classified annex.

Section 109

Section 109 provides that nothing in the Act may constitute authority for any action in violation of any obligation of the United States under the Nuclear Non-Proliferation Treaty.

Secretary Rice has stated that

> While India has nuclear weapons and we must deal with this fact in realistic, pragmatic manner, we do not recognize India as a nuclear weapon state or seek to legitimize India's nuclear weapons program.
>
> The 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) defines a "Nuclear Weapon State" as "one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to January 1, 1967." India does not meet this definition, and we do not seek to amend the Treaty to provide otherwise. U.S. law adopts the NPT definition, so India is a non-nuclear weapon state for purposes of U.S. law.[77]

The committee is unaware of any formal compliance assessment done by the Department of State regarding U.S. NPT obligations and cooperation in atomic energy with India.

The NPT has been the most successful multilateral nonproliferation treaty in history. It has, indeed, created an international norm

[77] April 5 QFRs.

against the spread of nuclear weapons, and its success has led to the adoption of other nonproliferation treaties, agreements, instruments, regimes, organizations and activities. The committee believes that the NPT has been and is the foundation of international nonproliferation. The administration has called the NPT:

> . . . one of the great success stories of arms control. It has made major contributions to global security and economic well being. It has been remarkably successful in achieving its main goals and—with nearly 190 parties—has become the most widely-adhered to arms control treaty in history. The NPT is an indispensable tool in preventing the spread of nuclear weapons.[78]

President Bush has said that "The NPT represents a key legal barrier to nuclear weapons proliferation and makes a critical contribution to international security. . . . The United States remains firmly committed to its obligations under the NPT."[79]

The Committee on Foreign Relations reported the NPT to the Senate in 1968 and 1969.[80] As the committee of the Senate with jurisdiction over international aspects of nuclear energy, including nuclear transfer policy,[81] the committee believes there must be no infringement of any U.S. obligation under the NPT in any phase of renewed cooperation in atomic energy with India.

Section 110

Section 110 would render any determination under section 105 and any waiver under section 104 ineffective if the President determines that India has detonated a nuclear explosive device after the date of the enactment of the Act.

The committee notes that section 123 a.(4) of the Atomic Energy Act (42 USC 2153(a)(4)) requires any peaceful nuclear cooperation agreement with India to provide that, should India detonate a nuclear explosive device for any reason, the United States shall have the right to demand the return of "any nuclear materials and equipment transferred pursuant" to the agreement for cooperation as well as any "special nuclear material produced through the use thereof if the cooperating party detonates a nuclear explosive device[.]" The President may exempt an agreement from that requirement, but, as noted earlier, administration officials have informed the committee that they do not believe they could meet the legal standard for invoking such an exemption.

The committee fully expects the administration to negotiate an agreement with India that meets the standard set out in section 123 a.(4) of the Atomic Energy Act, in particular since the administration's legislative proposal (S. 2429) contained no exemption for India from any requirement other than that for full-scope safeguards. Failure to meet this standard would make it difficult for the committee to favor any agreement with India, even if the exemption standard in section 123 were met.

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[78] U.S. Department of State, Bureau of Nonproliferation, Fact Sheet: The Treaty on the Non-Proliferation of Nuclear Weapons: A Global Success (Jan. 20, 2001), available at http://www.state.gov/t/isn/trty/16281.htm.

[79] The White House, President's Statement on Non-Proliferation of Nuclear Weapons Treaty (Mar. 7, 2005), available at http://www.whitehouse.gov/news/releases/2005/03.

[80] Executive Reports 90–2 and 91–1, September 27, 1968 and March 6, 1969.

[81] Clause (7) of Paragraph (j) (1) of Rule XXV of the Standing Rules of the Senate, available at http://rules.senate.gov/senaterules/rule25.php.

The committee notes that under the Act, U.S. nuclear cooperation with India would also be terminated should India detonate a nuclear explosive device, for any reason, as, under subparagraph 104(a)(3)(B) of the Act, section 129(1)(A) of the Atomic Energy Act fully applies to any detonation on or after July 18, 2005. Section 110 thus clarifies an issue that was more ambiguous in section 1(d) of S. 2429.

The committee notes that, with regard to India's 1974 detonation of a nuclear explosive device, the administration cannot state whether India violated its 1956 heavy water contract with the United States and its 1963 agreement for cooperation in atomic energy with the United States:

> 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.[82]

The committee believes that there should be absolutely no ambiguity regarding the legal and policy implications of any future Indian nuclear detonation. The President must terminate all U.S.-origin exports and reexports of nuclear materials and equipment or sensitive nuclear technology to India, and the committee expects the President to make full and immediate use of U.S. rights to demand the return of all exports and reexports to India, if India tests or detonates, or otherwise causes the test or detonation of a nuclear explosive device, for any reason, including such instances in which India describes its actions as being "for peaceful purposes." The committee believes that termination would include the suspension and revocation of any current or pending export or reexport licenses, and that the return of U.S.-origin items and materials should extend to any special nuclear material produced by India through the use of any nuclear materials and equipment or sensitive nuclear technology exported or reexported to India by the United States.

Section 111

Section 111 of the Act states that "Congress finds that India is not an MTCR adherent for the purposes of section 73 of the Arms Export Control Act (22 U.S.C. 2797b)."

The committee included this provision to clarify the status accorded to India. Section 73 of the Arms Export Control Act (AECA) mandates sanctions on transfers of MTCR equipment or technology if the President determines that a foreign person knowingly exports, transfers, or otherwise engages in the trade of any MTCR equipment or technology that contributes to the acquisition, design, development, or production of missiles in a country that is not an MTCR adherent and would be, if it were United States-origin equipment or technology, subject to the jurisdiction of the United States under the AECA; or if a foreign person conspires to or attempts to engage in such export, transfer, or trade; or if a foreign

[82] November 2 Hearing.

person facilitates such an export, transfer, or trade by any other person; or if the President has made a determination with respect to a foreign person under section 11B(b)(1) of the Export Administration Act of 1979 (50 USC App. 2410b(b)(1)).

Section 73 of AECA is, however, inapplicable to MTCR adherents if the export in question is "any export, transfer, or trading activity that is authorized by the laws of an MTCR adherent, if such authorization is not obtained by misrepresentation or fraud" or if the export, transfer, or trade of an item is to an end user in a country that is an MTCR adherent (section 73(b)). Section 73 also provides for the termination of sanctions when an MTCR adherent takes steps towards effective judicial enforcement against persons violating the prohibitions in section 73, if such actions are "comprehensive" and are "performed to the satisfaction of the United States" and the findings of such proceedings are satisfactory to the United States (section 73(c)(1)(A) and (B) and section 73(c)(2)).

When Congress created section 73, it did so specifically to make clear that a country will enjoy substantial protection from the MTCR sanctions law only if it specifically agrees not to transfer any missile-related equipment or technology that would be subject to U.S. jurisdiction under the AECA (if it were U.S.-origin equipment or technology). Any country that has not agreed to take this step—perhaps having only agreed to control production equipment, for instance—should be aware that it still may be sanctioned under the AECA even if it concludes a bilateral understanding with the United States.[83]

In April 2006, Chairman Lugar inquired of Secretary Rice whether India's July 18 Joint Statement commitment to harmonize and adhere to the MTCR guidelines would render it an adherent for the purposes of Section 73 such that missile sanctions would generally not apply in the future to India or to countries which sell missile technology to India. The Secretary found that "India would not be considered an 'MTCR Adherent' as defined under Section 73" because:

> India has committed to unilaterally adhere to the Missile Technology Control Regime (MTCR) Guidelines. The missile sanctions law would generally still apply to a "unilateral adherent" to the MTCR.
>
> Unilateral adherence to the MTCR Guidelines means that a country makes a unilateral political commitment to abide by the Guidelines and Annex of the MTCR. In particular, an MTCR unilateral adherent commits to control exports of missile-related equipment and technology according the MTCR Guidelines, including any subsequent changes to the MTCR Guidelines and Annex. Inter alia, this means that MTCR unilateral adherent countries need to have in place laws and regulations that permit them to control the export of MTCR Annex equipment and technology consistent with the MTCR Guidelines.
>
> An "MTCR Adherent" is a specially defined status in terms of Section 73 of the Arms Export Control Act (also referred to as the missile sanctions law). An "MTCR Adherent," as defined in Section 73 of the missile sanctions law, is a country that "participates" in the MTCR or that, "pursuant to an international understanding to which the United States is a party,

[83] Conference Report to Accompany H.R. 3194, "Making Appropriations for the Government of the District of Columbia and Other Activities Chargeable in Whole or in Part Against Revenues of Said District for the Fiscal Year Ending September 30, 2000, and for Other Purposes," p. 1076. Sec. 1136(c) of the Arms Control and Nonproliferation Act of 1999 (title XI of the Admiral James W. Nance and Meg Donovan Foreign Relations Authorization Act, Fiscal Years 2000 and 2001 (H.R. 3427, which was enacted by reference in sec. 1000(a)(7) of Public Law 106–113; 113 Stat. 1536)).

controls MTCR equipment and technology in accordance with the criteria and standards set forth in the MTCR." India's "unilateral adherence" to the MTCR would not meet this requirement.[84]

Since India's unilateral adherence does not qualify it as an MTCR adherent under section 73 of AECA, the committee included section 111 to clarify this point. While the provision accomplishes this, it is also drafted in such a manner as to permit India, should it so decide in the future, to enjoy the benefits of AECA section 73 by becoming a full adherent to the MTCR. Because the provision states a factual finding by Congress, the provision would no longer have effect if India were to meet the requirements laid out as in Secretary Rice's answer. Under section 111, however, India's transfers of missile or missile-related equipment, technology and technical data, remain for now subject to U.S. sanctions if they should violate subsection 73(a) of AECA.

Section 112

Section 112 is a technical amendment to section 1112(c)(4) of the Arms Control and Nonproliferation Act of 1999 to make clear that the Assistant Secretary of State for Verification and Compliance has responsibility, within the Department of State, for so much of the reports required by section 108 of the Act recommended by the committee as relates to verification or compliance matters. This is in keeping with existing law, which gives that official such responsibility for "other reports being prepared by the Department of State . . . relating to . . . nonproliferation verification or compliance matters."

Earlier this year, the Department adjusted the responsibilities of the Assistant Secretary for Verification and Compliance and changed the position title to Assistant Secretary of State for Verification, Compliance, and Implementation. The committee intends and understands that all the authorities provided in section 1112 of the Arms Control and Nonproliferation Act of 1999 are now vested in the Assistant Secretary of State for Verification, Compliance, and Implementation.

Section 113

Section 113 provides definitions of terms used throughout Title I of the Act.

IV. Cost Estimate

Rule XXVI, paragraph 11(a) of the Standing Rules of the Senate requires that the committee reports on bills or joint resolutions contain a cost estimate for such legislation. The Committee on Foreign Relations reported this legislation on June 29, 2006, providing the Congressional Budget Office more than four weeks to provide this cost estimate. To date, the committee has not received the Congressional Budget Office's cost estimate.

V. Evaluation of Regulatory Impact

In accordance with rule XXVI, paragraph 11(b) of the Standing Rules of the Senate, the committee makes the following evaluation

[84] April 5 Hearing.

of the regulatory impact which would be incurred in carrying out the provisions of S. 2429 under the committee's jurisdiction.

The committee inquired with the administration which regulatory requirements would need changes in order to permit peaceful civilian atomic energy cooperation with India. The committee notes, as above, that there are many U.S. regulations and laws implicated in nuclear trade, including the Export Administration Act and the Export Administration Regulations; the Arms Export Control Act; the Atomic Energy Act and Parts 110 and 810 of 10 CFR.

In November of 2005, Chairman Lugar inquired "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?" The administration responded that:

> 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.[85]

In April 2006, the Chairman requested that the committee be provided with a coordinated, interagency examination of all regulatory changes the administration would make to implement U.S.-Indian atomic energy cooperation if its exception to provisions of the Atomic Energy Act, as introduced in S. 2429, were enacted, and that such examination be particular with regard to any relevant portion of 10 CFR 110 and 810.

Secretary Rice, for the administration, responded by stating:

> [We have] noted that the proposed legislation would change the process of NRC licensing under 10 CFR 110.42(a)(6), which currently requires full-scope safeguards as a condition of issuing a license for export to a non-nuclear weapon state, unless waived by the President, in which case the provisions of Section 128 regarding congressional review would apply. The NRC would presumably amend this regulation to reflect the new legislation. Similarly, depending on the final wording of the new legislation, the NRC might have to modify 10 CFR 110.46, which would otherwise bar issuance of a license to a country found by the President to have detonated a nuclear explosive device, unless the President has waived the corresponding provision of Section 129 of the AEA.
>
> Also . . . the consideration, evaluation, coordination and reporting of DOE authorizations under 10 CFR Part 810 would not be affected with respect to the range of cooperation provided for under the proposed agreement for nuclear cooperation. To the extent that an authorization under Part 810 involved sensitive nuclear technology (SNT), the proposed legislation (unlike current law) would not require full-scope safeguards as a condition of supply. However, the proposed agreement for peaceful nuclear cooperation will not provide for exports of SNT; the agreement would have to be amended (and the amendment submitted to Congress for review) to allow for such exports. Depending on the final wording of the new legislation, DOE might have to consider whether amendments to its regulations would be required.
>
> The Department of Energy, the Nuclear Regulatory Commission, and the Department of Commerce would conduct a thorough review of their regula-

[85] November 2 QFRs.

tions to determine whether any changes would be required if the proposed legislation became law.[86]

The committee believes the Act reported in Title I largely conforms with S. 2429, and so presumes that most of the regulatory changes that would be implemented under the Act would be similar to those that would be required for S. 2429. The committee does not intend that section 106, which would bar the export of equipment, materials and technology related to the enrichment of uranium, and such items as are used in the production of heavy water, to result in regulatory amendments. The committee notes that, with regard to 10 CFR Part 810, the specific approval of the Secretary of Energy would already be required to engage in the production of special nuclear material outside the United States as India is a country listed in Part 810.8(a).

Likewise, engaging in or providing assistance or training to any foreign country that involves facilities for the separation of isotopes of source material or special nuclear material (enrichment) and the chemical processing of irradiated special nuclear material (reprocessing) also would require a specific approval from the Secretary of Energy. While it is, of course, up to the Department of Energy to determine what it must do to implement the provisions of section 106, it would appear to the committee that no major rule need be made nor a substantial amendment to the existing rules since section 106's effect would be to instruct the Secretary not to approve such activities unless they met the requirements of subsection 106(b)(2)(A)(i) and (ii) and the President was able to make a determination under subsection 106(b)(2)(B).

Regarding the NRC regulations at 10 CFR Part 110, the NRC would already have to issue a specific license for any of the technology that is implicated in section 106, so is likely the NRC would similarly decline or reject such export and reexport applications, or approve them subject to 106(b). More generally, the NRC would likely have to revise the treatment extended to India, which is now listed on the Restricted Destination List at Part 110.29, thus also changing certain treatment that would be extended to export or reexport authorizations of both a general and specific nature to India.

Section 107 of the Act, which requires an end use monitoring program to verify that all U.S. exports and reexports to India are used as strictly for peaceful purposes and as stipulated in the licensure of the relevant agencies. Section 107 could result in certain regulatory adjustments, but the committee does not intend that they would be major in scope since the provision should not result in additional duties on the applicants but rather on the regulatory agencies themselves to verify most of the diligence requirements and assurances already required on such licenses. This is true in particular because existing similar procedures for U.S. nuclear cooperation with China have not resulted in any regulatory amendments.

Rule XXVI requires that the committee evaluate and include (A) an estimate of the numbers of individuals and businesses who would be regulated and a determination of the groups and classes of such individuals and businesses; (B) a determination of the eco-

[86] April 5 Hearing.

nomic impact of such regulation on the individuals, consumers, and businesses affected; (C) a determination of the impact on the personal privacy of the individuals affected; and (D), a determination of the amount of additional paperwork that will result from the regulations to be promulgated pursuant to the bill.

The committee's recommended Title I provisions on U.S.-India civilian nuclear commerce, as noted above, would implicate any person or entity seeking to export or re-export nuclear items to India subject to pertinent authorities (statutory and administrative) for which licenses are required. This would be the case with or without enactment of the Act, since such regulations will need to be modified in any case for such trade with India, and would apply to the information in Rule 26 (11)(b)(1) (B), (C) and (D). Therefore, pursuant to Rule 26 (11)(b)(2), the committee finds that it is impractical to include particular information regarding the regulatory impact at this time.

Regarding Title II, the U.S. Additional Protocol Implementation Act, the committee included its regulatory impact assessment with S. 2489 when it reported that measure to the Senate.

VI. Changes in Existing Law

In compliance with paragraph 12 of Rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman).

Arms Control and Nonproliferation Act of 1999

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Subtitle A—Arms Control

CHAPTER 1—EFFECTIVE VERIFICATION OF COMPLIANCE WITH ARMS CONTROL AGREEMENTS

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SEC. 1112. ASSISTANT SECRETARY OF STATE FOR VERIFICATION AND COMPLIANCE.

(a) Designation of Position.—The Secretary of State shall designate one of the Assistant Secretaries of State authorized by section 1(c)(1) of the State Department Basic Authorities Act of 1956 (22 U.S.C. 2651a(c)(1)) as the Assistant Secretary of State for Verification and Compliance. The Assistant Secretary shall report to the Under Secretary of State for Arms Control and International Security.

(b) Directive Governing the Assistant Secretary of State.—

(1) In general.—Not later than 30 days after the date of enactment of this Act, the Secretary of State shall issue a directive governing the position of the Assistant Secretary.

(2) Elements of the directive.—The directive issued under paragraph (1) shall set forth, consistent with this section—

(A) the duties of the Assistant Secretary;

(B) the relationships between the Assistant Secretary and other officials of the Department of State;

(C) any delegation of authority from the Secretary of State to the Assistant Secretary; and

(D) such matters as the Secretary considers appropriate.

(c) DUTIES.—

(1) IN GENERAL.—The Assistant Secretary shall have as his principal responsibility the overall supervision (including oversight of policy and resources) within the Department of State of all matters relating to verification and compliance with international arms control, nonproliferation, and disarmament agreements or commitments.

(2) PARTICIPATION OF THE ASSISTANT SECRETARY.—

(A) PRIMARY ROLE.—Except as provided in subparagraphs (B) and (C), the Assistant Secretary, or his designee, shall participate in all interagency groups or organizations within the executive branch of Government that assess, analyze, or review United States planned or ongoing policies, programs, or actions that have a direct bearing on verification or compliance matters, including interagency intelligence committees concerned with the development or exploitation of measurement or signals intelligence or other national technical means of verification.

(B) REQUIREMENT FOR DESIGNATION.—Subparagraph (A) shall not apply to groups or organizations on which the Secretary of State or the Undersecretary of State for Arms Control and International Security sits, unless such official designates the Assistant Secretary to attend in his stead.

(C) NATIONAL SECURITY LIMITATION.—

(i) WAIVER BY PRESIDENT.—The President may waive the provisions of subparagraph (A) if inclusion of the Assistant Secretary would not be in the national security interests of the United States.

(ii) WAIVER BY OTHERS.—With respect to an interagency group or organization, or meeting thereof, working with exceptionally sensitive information contained in compartments under the control of the Director of Central Intelligence, the Secretary of Defense, or the Secretary of Energy, such Director or Secretary, as the case may be, may waive the provision of subparagraph (A) if inclusion of the Assistant Secretary would not be in the national security interests of the United States.

(iii) TRANSMISSION OF WAIVER TO CONGRESS.—Any waiver of participation under clause (i) or (ii) shall be transmitted in writing to the appropriate committees of Congress.

(3) RELATIONSHIP TO THE INTELLIGENCE COMMUNITY.—The Assistant Secretary shall be the principal policy community representative to the intelligence community on verification and compliance matters.

(4) REPORTING RESPONSIBILITIES.—The Assistant Secretary shall have responsibility within the Department of State for—

(A) all reports required pursuant to section 306 of the Arms Control and Disarmament Act (22 U.S.C. 2577);

(B) so much of the report required under paragraphs (4) through (6) of section 403(a) of the Arms Control and Disarmament Act (22 U.S.C. 2593a(a)(4) through (6)) as relates to verification or compliance matters; [and]

(C) so much of the reports required under section 108 of the United States-India Peaceful Atomic Energy Cooperation Act as relates to verification or compliance matters; and

[(C)] *(D)* other reports being prepared by the Department of State as of the date of enactment of this Act relating to arms control, nonproliferation, or disarmament verification or compliance matters.

* * * * * * *

ANNEX

I.—JOINT STATEMENT BETWEEN PRESIDENT GEORGE W. BUSH AND PRIME MINISTER MANMOHAN SINGH

FOR IMMEDIATE RELEASE,
OFFICE OF THE PRESS SECRETARY,
July 18, 2005

Prime Minister Manmohan Singh and President Bush today declare their resolve to transform the relationship between their countries and establish a global partnership. As leaders of nations committed to the values of human freedom, democracy and rule of law, the new relationship between India and the United States will promote stability, democracy, prosperity and peace throughout the world. It will enhance our ability to work together to provide global leadership in areas of mutual concern and interest.

Building on their common values and interests, the two leaders resolve:

- To create an international environment conducive to promotion of democratic values, and to strengthen democratic practices in societies which wish to become more open and pluralistic.
- To combat terrorism relentlessly. They applaud the active and vigorous counterterrorism cooperation between the two countries and support more international efforts in this direction. Terrorism is a global scourge and the one we will fight everywhere. The two leaders strongly affirm their commitment to the conclusion by September of a UN comprehensive convention against international terrorism.

The Prime Minister's visit coincides with the completion of the Next Steps in Strategic Partnership (NSSP) initiative, launched in January 2004. The two leaders agree that this provides the basis for expanding bilateral activities and commerce in space, civil nuclear energy and dual-use technology.

Drawing on their mutual vision for the U.S.-India relationship, and our joint objectives as strong long-standing democracies, the two leaders agree on the following:

FOR THE ECONOMY

- Revitalize the U.S.-India Economic Dialogue and launch a CEO Forum to harness private sector energy and ideas to deepen the bilateral economic relationship.
- Support and accelerate economic growth in both countries through greater trade, investment, and technology collaboration.

- Promote modernization of India's infrastructure as a prerequisite for the continued growth of the Indian economy. As India enhances its investment climate, opportunities for investment will increase.
- Launch a U.S.-India Knowledge Initiative on Agriculture focused on promoting teaching, research, service and commercial linkages.

FOR ENERGY AND THE ENVIRONMENT

- Strengthen energy security and promote the development of stable and efficient energy markets in India with a view to ensuring adequate, affordable energy supplies and conscious of the need for sustainable development. These issues will be addressed through the U.S.-India Energy Dialogue.
- Agree on the need to promote the imperatives of development and safeguarding the environment, commit to developing and deploying cleaner, more efficient, affordable, and diversified energy technologies.

FOR DEMOCRACY AND DEVELOPMENT

- Develop and support, through the new U.S.-India Global Democracy Initiative in countries that seek such assistance, institutions and resources that strengthen the foundations that make democracies credible and effective. India and the U.S. will work together to strengthen democratic practices and capacities and contribute to the new U.N. Democracy Fund.
- Commit to strengthen cooperation and combat HIV/AIDs at a global level through an initiative that mobilizes private sector and government resources, knowledge, and expertise.

FOR NON-PROLIFERATION AND SECURITY

- Express satisfaction at the New Framework for the U.S.-India Defense Relationship as a basis for future cooperation, including in the field of defense technology.
- Commit to play a leading role in international efforts to prevent the proliferation of Weapons of Mass Destruction. The U.S. welcomed the adoption by India of legislation on WMD (Prevention of Unlawful Activities Bill).
- Launch a new U.S.-India Disaster Relief Initiative that builds on the experience of the Tsunami Core Group, to strengthen cooperation to prepare for and conduct disaster relief operations.

FOR HIGH-TECHNOLOGY AND SPACE

- Sign a Science and Technology Framework Agreement, building on the U.S.-India High-Technology Cooperation Group (HTCG), to provide for joint research and training, and the establishment of public-private partnerships.
- Build closer ties in space exploration, satellite navigation and launch, and in the commercial space arena through mechanisms such as the U.S.-India Working Group on Civil Space Cooperation.

- Building on the strengthened nonproliferation commitments undertaken in the NSSP, to remove certain Indian organizations from the Department of Commerce's Entity List.

Recognizing the significance of civilian nuclear energy for meeting growing global energy demands in a cleaner and more efficient manner, the two leaders discussed India's plans to develop its civilian nuclear energy program.

President Bush conveyed his appreciation to the Prime Minister over India's strong commitment to preventing WMD proliferation and stated that as a responsible state with advanced nuclear technology, India should acquire the same benefits and advantages as other such states. The President told the Prime Minister that he will work to achieve full civil nuclear energy cooperation with India as it realizes its goals of promoting nuclear power and achieving energy security. The President would also seek agreement from Congress to adjust U.S. laws and policies, and the United States will work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India, including but not limited to expeditious consideration of fuel supplies for safeguarded nuclear reactors at Tarapur. In the meantime, the United States will encourage its partners to also consider this request expeditiously. India has expressed its interest in ITER and a willingness to contribute. The United States will consult with its partners considering India's participation. The United States will consult with the other participants in the Generation IV International Forum with a view toward India's inclusion.

The Prime Minister conveyed that for his part, India would reciprocally agree that it would be ready to 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. These responsibilities and practices consist of identifying and separating civilian and military nuclear facilities and programs in a phased manner and filing a declaration regarding its civilians facilities with the International Atomic Energy Agency (IAEA); taking a decision to place voluntarily its civilian nuclear facilities under IAEA safeguards; signing and adhering to an Additional Protocol with respect to civilian nuclear facilities; continuing India's unilateral moratorium on nuclear testing; working with the United States for the conclusion of a multilateral Fissile Material Cut Off Treaty; refraining from transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread; and ensuring that the necessary steps have been taken to secure nuclear materials and technology through comprehensive export control legislation and through harmonization and adherence to Missile Technology Control Regime (MTCR) and Nuclear Suppliers Group (NSG) guidelines.

The President welcomed the Prime Minister's assurance. The two leaders agreed to establish a working group to undertake on a phased basis in the months ahead the necessary actions mentioned above to fulfill these commitments. The President and Prime Minister also agreed that they would review this progress when the President visits India in 2006.

The two leaders also reiterated their commitment that their countries would play a leading role in international efforts to prevent the proliferation of weapons of mass destruction, including nuclear, chemical, biological and radiological weapons.

In light of this closer relationship, and the recognition of India's growing role in enhancing regional and global security, the Prime Minister and the President agree that international institutions must fully reflect changes in the global scenario that have taken place since 1945. The President reiterated his view that international institutions are going to have to adapt to reflect India's central and growing role. The two leaders state their expectations that India and the United States will strengthen their cooperation in global forums.

Prime Minister Manmohan Singh thanks President Bush for the warmth of his reception and the generosity of his hospitality. He extends an invitation to President Bush to visit India at his convenience and the President accepts that invitation.

II.—Statement on Civil Nuclear Cooperation With India

1. At the _____ Plenary meeting on _____ the Participating Governments of the Nuclear Suppliers Group agreed that they:
   a. Desire to contribute to an effective non-proliferation regime, and to the widest possible implementation of the objectives of the Treaty on the Non-Proliferation of Nuclear Weapons;
   b. Seek to limit the further spread of nuclear weapons;
   c. Wish to pursue mechanisms to affect positively the conduct of those outside the Treaty;
   d. Seek to promote international cooperation in the research, development and the safe use of nuclear energy for peaceful purposes; and
   e. Recognize the promise of nuclear power in India as a clean source of energy for sustained economic growth and prosperity.
2. In this respect, Participating Governments have taken note of steps that India has taken to contribute to the non-proliferation regime and they welcome India's efforts with respect to the following commitments and actions:
   a. Has publicly designated civil nuclear facilities which will be submitted to IAEA safeguards in perpetuity;
   b. Has committed to continue its moratorium on nuclear testing, and to work with others towards achievement of a Fissile Material Cutoff Treaty;
   c. Has committed to sign and adhere to an Additional Protocol covering designated civil nuclear facilities;
   d. Has committed to support international efforts to restrain the spread of sensitive nuclear technologies;
   e. Has adopted a national export control system capable of effectively controlling transfers of multilaterally controlled nuclear and nuclear-related material, equipment and technology;
   f. Has committed to adhere to the Nuclear Supplier Group Guidelines.
3. For these reasons, Participating Governments have adopted the following policy on civil nuclear cooperation by Participating Governments with the peaceful safeguarded Indian civil nuclear power program.
4. Notwithstanding paragraphs 4(a), 4(b) and 4(c), of INFCIRC/254/Part 1 as revised (the NSG Guidelines), Participating Governments may transfer trigger list items and/or related technology for use in civil nuclear facilities in India, in accordance with paragraph 4(d) as long as the [Participating Government] intending to make the transfer is satisfied that India is continuing to meet all of the aforementioned non-proliferation and safeguards commitments, and that the contemplated transfer complies with all of the other conditions of the NSG Guidelines.
5. Participating Governments, in accordance with paragraph 4(d), of the NSG Guidelines, will continue to strive for the earliest possible implementation of the policy referred to in paragraph 4(a)

with respect to transfers of trigger list items and related technology to India.

6. The NSG Point of Contact is requested to submit this Statement to the IAEA Director General with a request that he circulate it to all Member States.

III.—Implementation of the India—United States Joint Statement of July 18, 2005: India's Separation Plan

MARCH 2, 2006

The resumption of full civilian nuclear energy cooperation between India and the United States arose in the context of India's requirement for adequate and affordable energy supplies to sustain its accelerating economic growth rate and as recognition of its growing technological prowess. It was preceded by discussions between the two Governments, particularly between President Bush and Prime Minister Manmohan Singh, of the global energy scenario and the long-term implications of increasing pressure on hydrocarbon resources and rising oil prices. These developments led to the announcement in April 2005 of an Indo-U.S. Energy Dialogue that encompassed the entire spectrum of energy options ranging from oil and gas to coal, alternative fuels and civilian nuclear energy. Through the initiation of a sustained dialogue to address energy security concerns, the two countries sought to promote stable, efficient, predictable and cost effective solutions for India's growing requirements. At the same time, they also agreed on the need to develop and deploy cleaner, more efficient, affordable and diversified energy technologies to deal with the environmental implications of energy consumption. India had developed proven and wide-ranging capabilities in the nuclear sector, including over the entire nuclear fuel cycle. It is internationally recognized that India has unique contributions to make to international efforts towards meeting these objectives. India has become a full partner in ITER, with the full support of the U.S. and other partners. India also accepted the U.S. invitation to join the initiative on Clean Development Partnership.

2. Noting the centrality of civilian nuclear energy to the twin challenges of energy security and safeguarding the environment, the two Governments agreed on 18 July 2005 to undertake reciprocal commitments and responsibilities that would create a framework for the resumption of full cooperation in this field. On its part, the United States undertook to:

- Seek agreement from the Congress to adjust U.S. laws and policies to achieve full civil nuclear energy cooperation.
- Work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India, including but not limited to expeditious consideration of fuel supplies for safeguarded nuclear reactors at Tarapur.
- In the meantime, encourage its partners to consider fuel supply to Tarapur expeditiously.
- To consult with its partners to consider India's participation in ITER.
- To consult with other participants in the Generation-IV International Forum with a view towards India's inclusion.

3. India had conveyed its readiness to 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. Accordingly, India for its part undertook the following commitments:

- Identifying and separating civilian and military nuclear facilities and programmes in a phased manner.
- Filing a declaration regarding its civilian facilities with the IAEA.
- Taking a decision to place voluntarily its civilian nuclear facilities under IAEA safeguards, and
- Signing and adhering to an Additional Protocol with respect to civilian nuclear facilities.

4. Other commitments undertaken by India have already been fulfilled in the last year. Among them are:

- India's responsible non-proliferation record, recognized by the U.S., continues and is reflected in its policies and actions.
- The harmonization of India's export controls with NSG and MTCR Guidelines even though India is not a member of either group. These guidelines and control lists have been notified and are being implemented.
- A significant upgrading of India's non-proliferation regulations and export controls has taken place as a result of the Weapons of Mass Destruction Act of May 2005. Inter-Ministerial consultations are ongoing to examine and amend other relevant Acts as well as framing appropriate rules and regulations.
- Refrain from transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread. This has guided our policy on non-proliferation.
- Continued unilateral moratorium on nuclear testing, and
- Willingness to work with the United States for the conclusion of a multilateral Fissile Material Cut-off Treaty.

5. The Joint Statement of July 18, 2005, recognized that India is ready to assume the same responsibilities and practices as other leading countries with advanced nuclear technology, such as the United States. India has an impeccable record in non-proliferation. The Joint Statement acknowledges that India's nuclear programme has both a military and a civilian component. Both sides had agreed that the purpose was not to constrain India's strategic programme but to enable resumption of full civil nuclear energy cooperation in order to enhance global energy and environmental security. Such cooperation was predicated on the assumption that any international civil nuclear energy cooperation (including by the U.S.) offered to India in the civilian sector should, firstly, not be diverted away from civilian purposes, and secondly, should not be transferred from India to third countries without safeguards. These concepts will be reflected in the Safeguards Agreement to be negotiated by India with IAEA.

6. India's nuclear programme is unique as it is the only state with nuclear weapons not to have begun with a dedicated military programme. It must be appreciated that the strategic programme is an offshoot of research on nuclear power programme and con-

sequently, it is embedded in a larger undifferentiated programme. Identification of purely civilian facilities and programmes that have no strategic implications poses a particular challenge. Therefore, facilities identified as civilian in the Separation Plan will be offered for safeguards in phases to be decided by India. The nature of the facility concerned, the activities undertaken in it, the national security significance of materials and the location of the facilities are factors taken into account in undertaking the separation process. This is solely an Indian determination.

7. The nuclear establishment in India not only built nuclear reactors but promoted the growth of a national industrial infrastructure. Nuclear power generation was envisaged as a three-stage programme with PHWRs chosen for deployment in the first stage. As indigenous reactors were set up, several innovative design improvements were carried out based on Indian R&D and a standardized design was evolved. The research and technology development spanned the entire spectrum of the nuclear fuel cycle including the front end and the back end. Success in the technologies for the back end of the fuel cycle allowed us to launch the second stage of the programme by constructing a Fast Breeder Test Reactor. This reactor has operated for 20 years based on a unique carbide fuel and has achieved all technology objectives. We have now proceeded further and are constructing a 500 MWe Prototype Fast Breeder Reactor. Simultaneously, we have launched design and development of reactors aimed at thorium utilization and incorporating inherent safety features.

8. Concepts such as grid connectivity are not relevant to the separation exercise. Issues related to fuel resource sustainability, technical design and economic viability, as well as smooth operation of reactors are relevant factors. This would necessitate grid connectivity irrespective of whether the reactor concerned is civilian or not civilian.

9. It must be recognized that the Indian nuclear programme still has a relatively narrow base and cannot be expected to adopt solutions that might be deemed viable by much larger programmes. A comparison of the number of reactors and the total installed capacity between India and the P-5 brings this out graphically:

Country	Number of reactors	Total installed capacity
India	15	3.04 GWe (2.8% of the total production)
USA	104 (103 operational)	99.21 GWe (19.9% of the total production)
France	59	63.36 GWe (78.1% of the total production)
UK	23	11.85 GWe (19.4% of the total production)
Russia	31	21.74 GWe (15.6% of the total production)

Country	Number of reactors	Total installed capacity
China	9	6.602 GWe (2.2% of the total production)

Source: Nuclear Energy Institute, Washington DC

10. Another factor to be taken into account is the small capacity of the reactors produced indigenously by India, some of which would remain outside safeguards. Therefore, in assessing the extent of safeguards coverage, it would be important to look at both the number of reactors and the percentage of installed capacity covered. An average Indian reactor is of 220 MW and its output is significantly smaller than the standard reactor in a P-5 economy. The chart below illustrates this aspect:

Country	Most Common Reactor	Number of Such Reactors
India	PHWRs 220 MWe	12
USA	69 PWRs and 34 BWRs. Most plants are in the range of 1000-1250 MWe	51 Reactors in the range of 1000 MWe to 1250 MWe
France	PWRs of 900 MWe and 1300 MWe size	34 PWRs of 900 MWe and 20 PWRs of 1300 MWe
UK	No standard size. AGR is the most common in the range of 600–700 MWe	14 AGRs
Russia	3rd Generation VVER-1000 PWRs and RBMK 1000 Light Water Graphite Reactors	9 3rd Generation VVER-1000 PWRs and 11 RBMK 1000 Light Water Graphite Reactors
China	PWRs 984 MWe	Four

Source: Uranium Information Centre, Melbourne

11. The complexity of the separation process is further enhanced by the limited resources that India has devoted to its nuclear programme as compared to P–5 nations. Moreover, as India expands international cooperation, the percentage of its thermal power reactor installed capacity under safeguards would rise significantly as fresh capacity is added through such cooperation.

12. India's approach to the separation of its civilian nuclear facilities is guided by the following principles:

- Credible, feasible and implementable in a transparent manner;
- Consistent with the understandings of the 18 July Statement;
- Consistent with India's national security and R&D requirements as well as not prejudicial to the three-stage nuclear programme in India;
- Must be cost effective in its implementation; and
- Must be acceptable to Parliament and public opinion.

13. Based on these principles, India will:

- Include in the civilian list only those facilities offered for safeguards that, after separation, will no longer be engaged in activities of strategic significance.
- The overarching criterion would be a judgment whether subjecting a facility to IAEA safeguards would impact adversely on India's national security.
- However, a facility will be excluded from the civilian list if it is located in a larger hub of strategic significance, notwithstanding the fact that it may not be normally engaged in activities of strategic significance.
- A civilian facility would, therefore, be one that India has determined not to be relevant to its strategic programme.

14. Taking the above into account, India, on the basis of reciprocal actions by the U.S., will adopt the following approach:

(i) *Thermal Power Reactors:* India will identify and offer for safeguards 14 thermal power reactors between 2006 and 2014. This will include the 4 presently safeguarded reactors (TAPS 1&2, RAPS 1&2) and in addition KK 1&2 that are under construction. 8 other PHWRs, each of a capacity of 220 MW, will also be offered. Phasing of specific thermal power reactors, being offered for safeguards would be indicated separately by India. Such an offer would, in effect, cover 14 out of the 22 thermal power reactors in operation or currently under construction to be placed under safeguards, and would raise the total installed Thermal Power capacity by MWs under safeguards from the present 19% to 65% by 2014.

(ii) *Fast Breeder Reactors:* India is not in a position to accept safeguards on the Prototype Fast Breeder Reactor (PFBR) and the Fast Breeder Test Reactor (FBTR), both located at Kalpakkam. The Fast Breeder Programme is at the R&D stage and its technology will take time to mature and reach an advanced stage of development.

(iii) *Future Reactors:* India has decided to place under safeguards all future civilian thermal power reactors and civilian breeder reactors, and the Government of India retains the sole right to determine such reactors as civilian.

(iv) *Research Reactors:* India will permanently shut down the CIRUS reactor, in 2010. It will also be prepared to shift the fuel core of the APSARA reactor that was purchased from France outside BARC and make the fuel core available to be placed under safeguards in 2010.

(v) *Upstream Facilities:* The following upstream facilities would be identified and separated as civilian:

List of those specific facilities in the Nuclear Fuel Complex, which will be offered for safeguards by 2008 will be indicated separately.

The Heavy Water Production plants at Thal, Tuticorin and Hazira are proposed to be designated for civilian use between 2006–2009. We do not consider these plants as relevant for safeguards purposes.

(vi) *Downstream Facilities:* The following downstream facilities would be identified and separated as civilian:

India is willing to accept safeguards in the "campaign" mode after 2010 in respect of the Tarapur Power Reactor Fuel Reprocessing Plant.

The Tarapur and Rajasthan "Away From Reactors" spent fuel storage pools would be made available for safeguards with appropriate phasing between 2006–2009.

(vii) *Research Facilities:* India will declare the following facilities as civilian:

(a) Tata Institute of Fundamental Research

(c) Variable Energy Cyclotron Centre

(d) Saha Institute of Nuclear Physics

(e) Institute for Plasma Research

(f) Institute of Mathematics Sciences

(g) Institute of Physics

(h) Tata Memorial Centre

(i) Board of Radiation and Isotope Technology

(j) Harish Chandra Research Institute

These facilities are safeguards-irrelevant. It is our expectation that they will play a prominent role in international cooperation.

15. *Safeguards:*

(a) The United States has conveyed its commitment to the reliable supply of fuel to India. Consistent with the July 18, 2005, Joint Statement, the United States has also reaffirmed its assurance to create the necessary conditions for India to have assured and full access to fuel for its reactors. As part of its implementation of the July 18, 2005, Joint Statement the United States is committed to seeking agreement from the U.S. Congress to amend its domestic laws and to work with friends and allies to adjust the practices of the Nuclear Suppliers Group to create the necessary conditions for India to obtain full access to the international fuel market, including reliable, uninterrupted and continual access to fuel supplies from firms in several nations.

(b) To further guard against any disruption of fuel supplies, the United States is prepared to take the following additional steps:

(i) The United States is willing to incorporate assurances regarding fuel supply in the bilateral U.S.-India agreement on peaceful uses of nuclear energy under Section 123 of the U.S. Atomic Energy Act, which would be submitted to the U.S. Congress.

(ii) The United States will join India in seeking to negotiate with the IAEA an India-specific fuel supply agreement.

(iii) The United States will support an Indian effort to develop a strategic reserve of nuclear fuel to guard against

any disruption of supply over the lifetime of India's reactors.

(iv) If despite these arrangements, a disruption of fuel supplies to India occurs, the United States and India would jointly convene a group of friendly supplier countries to include countries such as Russia, France and the United Kingdom to pursue such measures as would restore fuel supply to India.

(c) In light of the above understandings with the United States, an India-specific safeguards agreement will be negotiated between India and the IAEA providing for safeguards to guard against withdrawal of safeguarded nuclear material from civilian use at any time as well as providing for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies. Taking this into account, India will place its civilian nuclear facilities under India-specific safeguards in perpetuity and negotiate an appropriate safeguards agreement to this end with the IAEA.

16. This plan is in conformity with the commitments made to Parliament by the Government.

March 2, 2006

IV.—Implementation of the India—United States Joint Statement of July 18, 2005: India's Separation Plan

MAY 6, 2006

The resumption of full civilian nuclear energy cooperation between India and the United States arose in the context of India's requirement for adequate and affordable energy supplies to sustain its accelerating economic growth rate and as recognition of its growing technological prowess. It was preceded by discussions between the two Governments, particularly between President Bush and Prime Minister Manmohan Singh, of the global energy scenario and the long-term implications of increasing pressure on hydrocarbon resources and rising oil prices. These developments led to the announcement in April 2005 of an Indo-U.S. Energy Dialogue that encompassed the entire spectrum of energy options ranging from oil and gas to coal, alternative fuels and civilian nuclear energy. Through the initiation of a sustained dialogue to address energy security concerns, the two countries sought to promote stable, efficient, predictable and cost effective solutions for India's growing requirements. At the same time, they also agreed on the need to develop and deploy cleaner, more efficient, affordable and diversified energy technologies to deal with the environmental implications of energy consumption. India had developed proven and wide-ranging capabilities in the nuclear sector, including over the entire nuclear fuel cycle. It is internationally recognized that India has unique contributions to make to international efforts towards meeting these objectives. India has become a full partner in ITER, with the full support of the U.S. and other partners. India also accepted the U.S. invitation to join the initiative on Clean Development Partnership.

2. Noting the centrality of civilian nuclear energy to the twin challenges of energy security and safeguarding the environment, the two Governments agreed on 18 July 2005 to undertake reciprocal commitments and responsibilities that would create a framework for the resumption of full cooperation in this field. On its part, the United States undertook to:

- Seek agreement from the Congress to adjust U.S. laws and policies to achieve full civil nuclear energy cooperation.
- Work with friends and allies to adjust international regimes to enable full civil nuclear energy cooperation and trade with India, including but not limited to expeditious consideration of fuel supplies for safeguarded nuclear reactors at Tarapur.
- In the meantime, encourage its partners to consider fuel supply to Tarapur expeditiously.
- To consult with its partners to consider India's participation in ITER.
- To consult with other participants in the Generation IV International Forum with a view towards India's inclusion.

3. India had conveyed its readiness to 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. Accordingly, India for its part undertook the following commitments:

- Identifying and separating civilian and military nuclear facilities and programmes in a phased manner.
- Filing a declaration regarding its civilian facilities with the IAEA.
- Taking a decision to place voluntarily its civilian nuclear facilities under IAEA safeguards, and
- Signing and adhering to an Additional Protocol with respect to civilian nuclear facilities.

4. Other commitments undertaken by India have already been fulfilled in the last year. Among them are:

- India's responsible non-proliferation record, recognized by the U.S., continues and is reflected in its policies and actions.
- The harmonization of India's export controls with NSG and MTCR Guidelines even though India is not a member of either group. These guidelines and control lists have been notified and are being implemented.
- A significant upgrading of India's non-proliferation regulations and export controls has taken place as a result of the Weapons of Mass Destruction Act of May 2005. Inter-Ministerial consultations are ongoing to examine and amend other relevant Acts as well as framing appropriate rules and regulations.
- Refrain from transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread. This has guided our policy on non-proliferation.
- Continued unilateral moratorium on nuclear testing, and
- Willingness to work with the United States for the conclusion of a multilateral Fissile Material Cut-Off Treaty.

5. The Joint Statement of 18 July 2005, recognized that India is ready to assume the same responsibilities and practices as other leading countries with advanced nuclear technology, such as the United States. India has an impeccable record in non-proliferation. The Joint Statement acknowledges that India's nuclear programme has both a military and a civilian component. Both sides had agreed that the purpose was not to constrain India's strategic programme but to enable resumption of full civil nuclear energy cooperation in order to enhance global energy and environmental security. Such cooperation was predicated on the assumption that any international civil nuclear energy cooperation (including by the U.S.) offered to India in the civilian sector should, firstly, not be diverted away from civilian purposes, and secondly, should not be transferred from India to third countries without safeguards. These concepts will be reflected in the Safeguards Agreement to be negotiated by India with IAEA.

6. India's nuclear programme is unique as it is the only state with nuclear weapons not to have begun with a dedicated military programme. It must be appreciated that the strategic programme is an offshoot of research on nuclear power programme and con-

sequently, it is embedded in a larger undifferentiated programme. Identification of purely civilian facilities and programmes that have no strategic implications poses a particular challenge. Therefore, facilities identified as civilian in the Separation Plan will be offered for safeguards in phases to be decided by India. The nature of the facility concerned, the activities undertaken in it, the national security significance of materials and the location of the facilities are factors taken into account in undertaking the separation process. This is solely an Indian determination.

7. The nuclear establishment in India not only built nuclear reactors but promoted the growth of a national industrial infrastructure. Nuclear power generation was envisaged as a three-stage programme with PHWRs chosen for deployment in the first stage. As indigenous reactors were set up, several innovative design improvements were carried out based on Indian R&D and a standardized design was evolved. The research and technology development spanned the entire spectrum of the nuclear fuel cycle including the front end and the back end. Success in the technologies for the back end of the fuel cycle allowed us to launch the second stage of the programme by constructing a Fast Breeder Test Reactor. This reactor has operated for 20 years based on a unique carbide fuel and has achieved all technology objectives. We have now proceeded further and are constructing a 500 MWe Prototype Fast Breeder Reactor. Simultaneously, we have launched design and development of reactors aimed at thorium utilization and incorporating inherent safety features.

8. Concepts such as grid connectivity are not relevant to the separation exercise. Issues related to fuel resource sustainability, technical design and economic viability, as well as smooth operation of reactors are relevant factors. This would necessitate grid connectivity irrespective of whether the reactor concerned is civilian or not civilian.

9. It must be recognized that the Indian nuclear programme still has a relatively narrow base and cannot be expected to adopt solutions that might be deemed viable by much larger programmes. A comparison of the number of reactors and the total installed capacity between India and the P-5 brings this out graphically:

Country	Number of reactors	Total installed capacity
India	15	3.04 GWe (2.8% of the total production)
USA	104 (103 operational)	99.21 GWe (19.9% of the total production)
France	59	63.36 GWe (78.1% of the total production)
UK	23	11.85 GWe (19.4% of the total production)
Russia	31	21.74 GWe (15.6% of the total production)

Country	Number of reactors	Total installed capacity
China	9	6.602 GWe (2.2% of the total production)

Source: Nuclear Energy Institute, Washington DC

10. Another factor to be taken into account is the small capacity of the reactors produced indigenously by India, some of which would remain outside safeguards. Therefore, in assessing the extent of safeguards coverage, it would be important to look at both the number of reactors and the percentage of installed capacity covered. An average Indian reactor is of 220 MW and its output is significantly smaller than the standard reactor in a P-5 economy. The chart below illustrates this aspect:

Country	Most Common Reactor	Number of Such Reactors
India	PHWRs 220 MWe	12
USA	69 PWRs and 34 BWRs. Most plants are in the range of 1000-1250 MWe	51 Reactors in the range of 1000 MWe to 1250 MWe
France	PWRs of 900 MWe and 1300 MWe size	34 PWRs of 900 MWe and 20 PWRs of 1300 MWe
UK	No standard size. AGR is the most common in the range of 600–700 MWe	14 AGRs
Russia	3rd Generation VVER-1000 PWRs and RBMK 1000 Light Water Graphite Reactors	9 3rd Generation VVER-1000 PWRs and 11 RBMK 1000 Light Water Graphite Reactors
China	PWRs 984 MWe	Four

Source: Uranium Information Centre, Melbourne

11. The complexity of the separation process is further enhanced by the limited resources that India has devoted to its nuclear programme as compared to P–5 nations. Moreover, as India expands international cooperation, the percentage of its thermal power reactor installed capacity under safeguards would rise significantly as fresh capacity is added through such cooperation.

12. India's approach to the separation of its civilian nuclear facilities is guided by the following principles:

- Credible, feasible and implementable in a transparent manner;
- Consistent with the understandings of the 18 July Statement;
- Consistent with India's national security and R&D requirements as well as not prejudicial to the three-stage nuclear programme in India;
- Must be cost effective in its implementation; and
- Must be acceptable to Parliament and public opinion.

13. Based on these principles, India will:

- Include in the civilian list only those facilities offered for safeguards that, after separation, will no longer be engaged in activities of strategic significance.
- The overarching criterion would be a judgment whether subjecting a facility to IAEA safeguards would impact adversely on India's national security.
- However, a facility will be excluded from the civilian list if it is located in a larger hub of strategic significance, notwithstanding the fact that it may not be normally engaged in activities of strategic significance.
- A civilian facility would, therefore, be one that India has determined not to be relevant to its strategic programme.

14. Taking the above into account, India, on the basis of reciprocal actions by the U.S., will adopt the following approach:

(i) *Thermal Power Reactors:* India will identify and offer for safeguards 14 thermal power reactors between 2006 and 2014. This will include the 4 presently safeguarded reactors (TAPS 1&2, RAPS 1&2) and in addition KK1&2 that are under construction. 8 other PHWRs, each of a capacity of 220 MWe, will also be offered. The overall plan will be as follows:

S. No.	Facility	Year offered for safeguards
1.	TAPS 1	2006
2.	TAPS 2	2006
3.	RAPS 1	2006
4.	RAPS 2	2006
5.	KK 1	2006
6.	KK 2	2006
7.	RAPS 5	2007
8.	RAPS 6	2008
9.	RAPS 3	2010
10.	RAPS 4	2010
11.	KAPS 1	2012
12.	KAPS 2	2012
13.	NAPS 1	2014
14.	NAPS 2	2014

The above offer would in effect, cover 14 out of the 22 thermal power reactors in operation or currently under construction to be placed under sadfeguards, and would raise the total installed Thermal Power capacity by Mwe under safeguards from the present 19% to 65% by 2012.

(ii) *Fast Breeder Reactors:* India is not in a position to accept safeguards on the Prototype Fast Breeder Reactor (PFBR) and the Fast Breeder Test Reactor (FBTR), both located at Kalpakkam. The Fast Breeder Programme is at the R&D stage and its technology will take time to mature and reach an advanced stage of development.

(iii) *Future Reactors:* India has decided to place under safeguards all future civilian thermal power reactors and civilian breeder reactors, and the Government of India retains the sole right to determine such reactors as civilian.

(iv) *Research Reactors:* India will permanently shut down the CIRUS reactor, in 2010. It will also be prepared to shift the fuel core of the APSARA reactor that was purchased from France outside BARC and make the fuel core available to be placed under safeguards in 2010.

(v) *Upstream Facilities:* The following upstream facilities would be identified and separated as civilian:

List of specific facilities in the Nuclear Fuel Complex, Hyderabad, which will be offered for safeguards by 2008 is given below:

—Uranium Oxide Plant (Block A)

—Ceramic Fuel Fabrication Plant (Pelletizing) (Block A)

—Enriched Uranium Oxide Plant

—Enriched Fuel Fabrication Plant

—Gadolinla Facility

The Heavy Water Production plants at Thal, Tuticorin and Hazira are proposed to be designated for civilian use between 2006–2009. We do not consider these plants as relevant for safeguards purposes.

(vi) *Downstream Facilities:* The following downstream facilities would be identified and separated as civilian:

India is willing to accept safeguards in the "campaign" mode after 2010 in respect of the Tarapur Power Reactor Fuel Reprocessing Plant.

The Tarapur and Rajasthan "Away From Reactors" spent fuel storage pools would be made available for safeguards with appropriate phasing between 2006–2009.

(vii) *Research Facilities:* India will declare the following facilities as civilian:

(a) Tata Institute of Fundamental Research

(c) Variable Energy Cyclotron Centre

(d) Saha Institute of Nuclear Physics

(e) Institute for Plasma Research

(f) Institute of Mathematics Sciences

(g) Institute of Physics

(h) Tata Memorial Centre

(i) Board of Radiation and Isotope Technology

(j) Harish Chandra Research Institute

These facilities are safeguards-irrelevant. It is our expectation that they will play a prominent role in international cooperation.

15. *Safeguards:*

(a) The United States has conveyed its commitment to the reliable supply of fuel to India. Consistent with the July 18, 2005, Joint Statement, the United States has also reaffirmed its assurance to create the necessary conditions for India to have assured and full access to fuel for its reactors. As part of its implementation of the July 18, 2005, Joint Statement the

United States is committed to seeking agreement from the U.S. Congress to amend its domestic laws and to work with friends and allies to adjust the practices of the Nuclear Suppliers Group to create the necessary conditions for India to obtain full access to the international fuel market, including reliable, uninterrupted and continual access to fuel supplies from firms in several nations.

(b) To further guard against any disruption of fuel supplies, the United States is prepared to take the following additional steps:

(i) The United States is willing to incorporate assurances regarding fuel supply in the bilateral U.S.-India agreement on peaceful uses of nuclear energy under Section 123 of the U.S. Atomic Energy Act, which would be submitted to the U.S. Congress.

(ii) The United States will join India in seeking to negotiate with the IAEA an India-specific fuel supply agreement.

(iii) The United States will support an Indian effort to develop a strategic reserve of nuclear fuel to guard against any disruption of supply over the lifetime of India's reactors.

(iv) If despite these arrangements, a disruption of fuel supplies to India occurs, the United States and India would jointly convene a group of friendly supplier countries to include countries such as Russia, France and the United Kingdom to pursue such measures as would restore fuel supply to India.

(c) In light of the above understandings with the United States, an India-specific safeguards agreement will be negotiated between India and the IAEA providing for safeguards to guard against withdrawal of safeguarded nuclear material from civilian use at any time as well as providing for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies. Taking this into account, India will place its civilian nuclear facilities under India-specific safeguards in perpetuity and negotiate an appropriate safeguards agreement to this end with the IAEA.

16. This plan is in conformity with the commitments made to Parliament by the Government.

May 6, 2006

V.—COMMUNICATION FROM SECRETARY RICE TO CHAIRMAN LUGAR, JUNE 28, 2006

THE SECRETARY OF STATE,
Washington, DC,
June 28, 2006.

Hon. Richard G. Lugar, *Chairman,*
U.S. Senate Committee on Foreign Relations,
Washington, DC.

DEAR MR. CHAIRMAN: I am pleased to confirm that, in carrying out the laws and regulations of the United States governing the export of nuclear-related items, the United States Government will continue to act in accordance with IAEA INFCIRC/254, as amended, the Guidelines and Annexes of the Nuclear Suppliers Group. The U.S. will also continue to act within the policies and practices of the decisions taken by the Nuclear Suppliers Group with respect to any exports to India. We intend to do so notwithstanding any contrary actions by any other participating countries in the Nuclear Suppliers Group.

We appreciate the committee's prompt action on this important legislation.

Sincerely,

CONDOLEEZZA RICE,
Secretary of State.

VI.—Responses to Additional Questions Submitted for the Record to Under Secretaries Nicholas Burns and Robert Joseph by Senator Biden, March 29, 2006[1]

INDIA'S NUCLEAR FACILITIES SEPARATION OFFER

Question (1)(a). India has decided to declare as "military" 8 of the 22 power reactors that it currently possesses or is building. Perhaps all of those 8 reactors will be Canadian-type reactors that can be used to produce weapons-grade plutonium.

How much weapons-grade plutonium has India been producing annually, in recent years?

Answer. We would be happy to discuss India's plutonium production, and other aspects of its nuclear weapons program, in an appropriate classified setting.

Question (1)(b). India has decided to declare as "military" 8 of the 22 power reactors that it currently possesses or is building. Perhaps all of those 8 reactors will be Canadian-type reactors that can be used to produce weapons-grade plutonium.

Which power reactors will India declare as "military?"

Answer. India's separation plan calls for 14 of 22 thermal power reactors—both existing and presently under construction—to be declared civil and placed under IAEA safeguards. To date, the 8 not declared civil have not yet been identified publicly.

Question (1)(c). India has decided to declare as "military" 8 of the 22 power reactors that it currently possesses or is building. Perhaps all of those 8 reactors will be Canadian-type reactors that can be used to produce weapons-grade plutonium.

How much plutonium could India make if the 8 reactors declared "military" were devoted to that mission?

Answer. We would be happy to discuss India's plutonium production, and other aspects of its nuclear weapons program, in an appropriate classified setting.

Question (1)(d). India has decided to declare as "military" 8 of the 22 power reactors that it currently possesses or is building. Perhaps all of those 8 reactors will be Canadian-type reactors that can be used to produce weapons-grade plutonium.

How many nuclear weapons can India produce each year, using its annual plutonium production? And how many could it make if the 8 reactors declared "military" were devoted to that mission?

Answer. We would be happy to discuss India's plutonium production, and other aspects of its nuclear weapons program, in an appropriate classified setting.

Question (2)(a). India already has a large stockpile of unseparated plutonium in its spent nuclear reactor fuel.

How much plutonium does India have, and how much unseparated plutonium is in its unsafeguarded spent nuclear fuel?

[1] Senator Biden submitted these questions following a Closed Session hearing held by the committee on March 29, 2006.

How many nuclear weapons could it produce with this stockpiled plutonium?

Answer. We would be happy to discuss India's plutonium production, and other aspects of its nuclear weapons program, in an appropriate classified setting.

Question (2)(b). India already has a large stockpile of unseparated plutonium in its spent nuclear reactor fuel.

Is that plutonium less useful for nuclear weapons than the plutonium that India might produce using the 8 reactors it will declare as "military?" If so, please explain.

Answer. India has existing stocks of both reactor-grade and weapons-grade plutonium. The heavy water power reactors that India has not declared as civil in its separation plan could produce either weapons-grade or reactor-grade plutonium, depending on how they were operated. In principle, either grade of plutonium could be used in a nuclear explosive device.

Question (3)(a). India will declare its pilot "fast breeder" reactor as "military." And while it may declare some future "fast breeder" reactors as "civil," it did not promise to do so.

Were there any side promises in this regard, either formal or informal? If so, please provide them.

Answer. India has said publicly that it will declare and safeguard all future civil fast breeder reactors. There were no "side promises" in this regard.

While India retains the sovereign right to determine whether future indigenous reactors serve a civil or military function—as it does today—neither we nor our international partners will cooperate with non-civil or non-safeguarded facilities. All externally-supplied reactors and other controlled technologies will by necessity be civil and subject to IAEA safeguards.

We would also note that India has indicated repeatedly that it intends to increase significantly its nuclear energy production. As such, India has a strong incentive to declare future reactors, including fast breeder reactors, as civil and thus to bring them under safeguards, as this is the only way that foreign material and technology could be made available for the construction and operation of such facilities. Moreover, India has expressed an interest in participating in the Global Nuclear Energy Partnership (GNEP), which is designed to enhance civil nuclear energy production while advancing nonproliferation objectives. As we have indicated to the government of India, India's decision not to designate its fast breeder reactors as civil and place under IAEA safeguards limits our ability to collaborate on issues related to the fast burner reactors contemplated under GNEP.

Question (3)(b). India will declare its pilot "fast breeder" reactor as "military." And while it may declare some future "fast breeder" reactors as "civil," it did not promise to do so.

Are there any understandings regarding future power reactors, or agreed criteria by which to determine whether a future power reactor is to be "civil" or "military?"

Answer. India has said publicly that it will declare and safeguard all future civil thermal and breeder reactors. India retains the sovereign right to determine whether future indigenous reactors serve a civil or military function—as it does today. However, neither we nor our international partners will cooperate with non-civil or non-safeguarded facilities. All externally-supplied reactors and other controlled technologies will by necessity be civil and subject to IAEA safeguards. We would also note that India has indicated repeatedly that it intends to significantly increase its nuclear energy production. As such, it has a strong incentive to declare future reactors, including its thermal reactors, as civil and thus bring them under safeguards, as this is the only way that foreign material and technology could be made available for the construction and operation of such facilities.

Question (4)(a). Aside from agreeing to subject an additional 8 civil reactors to international safeguards, what specific Indian actions/commitments from the July 18 Joint Statement were something that India had not or was not already committed to doing?

Answer. Prior to the July 18, 2005 Joint Statement, India had undertaken some nonproliferation measures that provided a solid foundation for the Civil Nuclear Cooperation Initiative. For example, it had passed new legislation, consistent with India's obligation under UN Security Council Resolution 1540, to enhance controls over the export and transit of weapons of mass destruction, associated delivery systems, and related technology. Moreover, the U.S.-India Next Steps in Strategic Partnership (NSSP) sought, inter alia, India's harmonization of its control lists with and unilateral adherence to the Nuclear Suppliers Group (NSG) and the Missile Technology Control Regime (MTCR). This commitment by India was reflected in the July 18, 2005 Joint Statement. Under the July 18 Joint Statement, India made the following new commitments:

- Identifying and separating its civil and military nuclear facilities and programs;
- Accepting IAEA safeguards in perpetuity on its civil nuclear facilities (including not only the 8 facilities noted in this Question, but also all future civil reactors—both breeder and thermal);
- Signing and adhering to an Additional Protocol with the IAEA;
- Strengthening its national export control system through harmonization with and unilateral adherence to the NSG and MTCR Guidelines;
- Refraining from the transfer of enrichment and reprocessing technologies to states that do not have them and supporting international efforts to limit their spread;
- Working with the U.S. for the conclusion of a multilateral Fissile Material Cutoff Treaty.

While UN Security Council Resolution 1540 required India to establish appropriate and effective export control measures, it did not specifically require harmonization of national export controls with specific regimes, such as the NSG and MTCR. Adherence to these regimes is a significant step. It not only indicates the seriousness

of India's commitment to prevent onward proliferation, but it represents a commitment on India's part to implement the export controls on sensitive items in the same manner as the members of the NSG and the MTCR.

In addition, prior to the U.S.-India Civil Nuclear Cooperation Initiative, India had undertaken a unilateral moratorium on nuclear weapons testing. India has committed under this Initiative to continue this unilateral moratorium. Including the testing moratorium among India's commitments under this Initiative will create substantial new economic and energy incentives for India to maintain that moratorium.

Each of these commitments is significant in its own right. Taken together, we believe these commitments represent a net gain for global nonproliferation efforts.

Question (4)(b). Which of these does the administration believe India will not implement if Congress does not approve the deal as currently configured?

Answer. We believe that the U.S.-India Civil Nuclear Cooperation Initiative is a sound arrangement that Congress should support. The commitments India has made will, when implemented, align India more closely than at any previous time with international nuclear nonproliferation standards and practices and thereby strengthen the global nonproliferation regime.

We cannot speculate on what India might or might not do if Congress does not approve legislation to facilitate the implementation of this Initiative, but firmly believe that if Congress does not permit the Initiative to proceed, the U.S.-India strategic relationship would suffer. We believe the best course is to lock-in the significant gains reached and then seek to achieve further nonproliferation results as our strategic partnership advances. We would urge that Congress resist the temptation to take actions that will prejudice our ability to realize the important and long-standing nonproliferation objectives embodied in the Initiative. The commitments India has made under the Initiative are a significant gain over the status quo.

Question (5)(a). India refused to declare the CIRUS reactor as either "civil" or "military." Instead, it will continue to use the reactor as a military facility until sometime in 2010, when it will shut down the reactor.

Did India violate its prior pledges to the United States and Canada when it used the CIRUS reactor to supply plutonium for its nuclear weapons program?

Answer. In response to a United States request, the Indian government committed to taking the CIRUS reactor out of commission by 2010 as part of its plan to separate civil and military nuclear facilities and programs.

With respect to CIRUS, the U.S. Government examined this matter around the time of India's 1974 test and was unable to reach a conclusive answer whether or not India had violated the 1956 contract for heavy water supply to the CIRUS reactor. Legally, there was a lack of mutual understanding between the U.S. and India on the scope of the language of the 1956 contract. Factually,

there was uncertainty as to whether U.S.-supplied heavy water contributed to the production of the plutonium used for India's nuclear explosive device.

Question (5)(b). India refused to declare the CIRUS reactor as either "civil" or "military." Instead, it will continue to use the reactor as a military facility until sometime in 2010, when it will shut down the reactor.

Even though the State Department did not declare India in violation of its pledges at the time, don't we know now that:

— the 1974 test was a nuclear weapon test;

— it used plutonium produced in a reactor that used U.S.-supplied heavy water; and

— the United States had made clear to India, well before the test, that the use of that heavy water to produce a so-called "peaceful nuclear explosive device" would be in contravention of Indian commitments?

Answer. While the United States does not accept the concept of a "peaceful nuclear explosion," India maintained in 1974 that its test was a peaceful nuclear explosion rather than a nuclear weapon test. At the time, there was a disagreement between the United States and India on the scope of the language in the 1956 contract to supply heavy water to the CIRUS Reactor. The U.S. made its view clear to India before the test; India responded that it had a different view. Agreements for peaceful nuclear cooperation subsequent to India's 1974 test have referred to "nuclear explosive device" without regard to the purported distinction between "peaceful" and "military" purposes.

Even in 1976, just two years after the test, it was not possible to reach a definitive determination as to whether U.S.-supplied heavy water contributed to the production of the plutonium used in the 1974 detonation. U.S. experts concluded at that time that India was not dependent upon the U.S. for the heavy water used in the CIRUS reactor during much of the period leading up to the 1974 test. Since the exact time at which the plutonium utilized in the test was produced remained undetermined, there was no basis for determining irrefutably that U.S.-supplied heavy water was present in the reactor when the plutonium was produced.

Question (5)(c). India refused to declare the CIRUS reactor as either "civil" or "military." Instead, it will continue to use the reactor as a military facility until sometime in 2010, when it will shut down the reactor.

How will you guard against similar conduct by India in the future?

Answer. All bilateral agreements for peaceful nuclear cooperation with non-nuclear weapon states (as India is treated under U.S. law consistent with the nuclear Non-Proliferation Treaty) now specify that U.S.-exported items cannot be used for any "nuclear explosive device." Under the U.S.-India Civil Nuclear Cooperation Initiative, the United States will not transfer nuclear technology, equipment, or material to an Indian nuclear facility that is not under IAEA safeguards, in accordance with our NPT obligations. Moreover, the

Joint Statement provides for effective measures to minimize any risk of diversion, including commitments by India to accept IAEA safeguards in perpetuity on its civil nuclear facilities and activities and to sign and adhere to an Additional Protocol. The IAEA safeguards required by this Initiative are designed to detect—and thereby prevent—the diversion to military use of any materials, technologies, or equipment provided to India's civil nuclear facilities.

In the July 18, 2005 Joint Statement, India committed to continuing its nuclear testing moratorium and we believe that India takes this commitment seriously. Should India nonetheless decide at some future time to revisit this commitment, in our view it will face a number of disincentives to detonate another nuclear explosive device.

If India detonated a nuclear explosive device after the proposed legislation was enacted, the Presidential determination under that law would no longer be effective. Peaceful nuclear cooperation with India would be subject to the prohibition in section 129 of the Atomic Energy Act. In addition, the broad sanctions under the Glenn Amendment (section 102(b) of the Arms Export Control Act) would be reinstated, as the waiver authority for those sanctions (under the Brownback II amendment) would lapse upon India's detonation of a nuclear explosive device. Sanctions would also apply under the Export-Import Bank Act (section 2(b)(4)). Finally, section 123(a)(4) of the Atomic Energy Act provides that any agreement for cooperation with a non-nuclear weapon state shall include "a stipulation that the United States shall have the right to require the return of any nuclear materials and equipment transferred pursuant thereto and any special nuclear material produced through the use thereof if the cooperating party detonates a nuclear explosive device."

Question (5)(d). India refused to declare the CIRUS reactor as either "civil" or "military." Instead, it will continue to use the reactor as a military facility until sometime in 2010, when it will shut down the reactor.

By letting India finesse this issue, do we set a precedent that other states could cite in the future?

Answer. We would not describe the CIRUS matter as a case of India "finessing" the issue. Nor do we believe that the CIRUS matter sets a precedent. The disagreement over the scope of the language in the 1956 contract was specific to the language of that contract. As a result of lessons learned after India's 1974 test, the U.S. adopted language in its agreements for peaceful nuclear cooperation that eliminates any ambiguity over the permissible uses of U.S.-supplied nuclear items. We do not believe that this dispute from 30 years ago over the 1956 contract will have a negative effect on the current actions of India or any other state.

Question (6)(a). India says that it adheres to a "minimum credible deterrent" policy regarding its nuclear weapons.

How many nuclear weapons does India have now? How many does it think it needs?

Answer. Unclassified estimates on the number of warheads possessed by India vary considerably; none of these are authoritative. We would be happy to discuss India's nuclear weapons program, including these specific queries, in an appropriate classified setting.

Question (6)(b). India says that it adheres to a "minimum credible deterrent" policy regarding its nuclear weapons.

Is India committed to building a triad of nuclear forces (land, sea and air) to match the force structures of China, Russia and the United States?

Answer. India has been open about its pursuit of land- and sea-based nuclear-capable ballistic missiles based on the Prithvi (liquid fuel) and the Agni (solid fuel).

We would be happy to discuss India's nuclear weapons program, including these specific queries, in an appropriate classified setting.

Question (6)(c). India says that it adheres to a "minimum credible deterrent" policy regarding its nuclear weapons.

How "minimal" can its deterrent be, if India is unwilling to stop its fissile material production or to set a future cap?

Answer. What constitutes a "minimal" deterrence for India can only be determined by the Government of India. We would be happy to discuss India's nuclear weapons program, including these specific queries, in an appropriate classified setting.

Question (6)(d). India says that it adheres to a "minimum credible deterrent" policy regarding its nuclear weapons.

Would Indian announcement of a conditional fissile material cap (e.g., tied to its neighbors' weapons numbers) be a useful step?

Answer. While in theory such an announcement could be a "useful step," it would be unwise to hold up the significant nonproliferation gains afforded by this Initiative in order to seek a fissile material cap that India indicates it cannot agree to absent a similar commitment by Pakistan and China.

The curtailment of the production of fissile material for weapons was discussed as part of the Civil Nuclear Cooperation Initiative, but India maintained that it could not agree to a unilateral cap at this time. The U.S. has achieved an important objective by obtaining India's commitment to work toward the conclusion of a multilateral Fissile Material Cutoff Treaty (FMCT). Moreover, we remain willing to explore other intermediate options that might also serve such an objective. We also continue to call on all states that produce fissile material for weapons purposes to observe a voluntary production moratorium, as the United States has done for many years.

Question (7)(a). India agreed to safeguards in perpetuity, but also said that they would be "India-specific" safeguards. India added that safeguards on its spent fuel reprocessing facility would be "in a campaign mode."

What are "India-specific" safeguards?

Answer. It will be incumbent on India to clarify what it means by "India-specific" safeguards in the context of its negotiations with the IAEA. In our view, the safeguards agreement for India will be

unique to India because India presents a unique set of circumstances. India has agreed to place all its civil nuclear facilities under safeguards in a phased manner, along with future civil facilities, but India is not an NPT party and will have non-civil facilities and material outside of safeguards. However, there is an accepted IAEA framework for safeguards (INFCIRC/66) that pre-dates the NPT and is suited to safeguarding material in a non-NPT party without full-scope safeguards. In its separation plan, India has committed to safeguards in perpetuity.

Question (7)(b). India agreed to safeguards in perpetuity, but also said that they would be "India-specific" safeguards. India added that safeguards on its spent fuel reprocessing facility would be "in a campaign mode."

If we don't know yet, how can Congress be expected to approve an "India exemption" from Atomic Energy Act requirements?

Answer. The details of the Indian commitment to place facilities under safeguards, and the basic principles and technical means by which the IAEA will carry out safeguards for those facilities and the materials they produce, are known. The IAEA and India will negotiate and agree upon a safeguards regime covering the facilities that India identifies as civil. In our view, that safeguards agreement best conforms to existing safeguards standards incorporated in the Agency's safeguards system (INFCIRC/66). The safeguards agreement must be approved by the IAEA Board of Governors, including, of course, the United States.

Question (7)(c). India agreed to safeguards in perpetuity, but also said that they would be "India-specific" safeguards. India added that safeguards on its spent fuel reprocessing facility would be "in a campaign mode."

If India plans to allow its spent fuel reprocessing plant to be safeguarded only intermittently, and safeguards will be lifted whenever the plant is used for military work, how effective will those safeguards be?

Answer. Safeguards have been applied by the IAEA successfully in this manner to the PREFRE reprocessing plant at Tarapur before. Such temporary safeguards are foreseen in non-NPT (INFCIRC/66) safeguards arrangements. When safeguards are applied in a campaign mode, the facility is safeguarded while safeguarded material is in the facility. The IAEA will monitor the spent fuel that arrives at the plant, take independent measurements of the amount of material fed into the process, account for all nuclear material in the process, and measure the product material, which will remain under safeguards.

It is true that this is not the most efficient way to operate for the facility or for safeguards implementation, but "campaign mode" safeguards on associated upstream and downstream facilities can be applied effectively based on agreed IAEA procedures.

Question (7)(d). India agreed to safeguards in perpetuity, but also said that they would be "India-specific" safeguards. India added that safeguards on its spent fuel reprocessing facility would be "in a campaign mode."

If the same facility is used for both civil and military purposes, how can any nuclear commerce involving that facility be considered strictly "civil" and peaceful?

Answer. As noted in the answer to (e) below, any cooperation would occur only while the facility is being safeguarded by the IAEA. For practical purposes this precludes meaningful cooperation with the facility itself. The United States does not intend to supply reprocessing (or, for that matter, enrichment) technology, equipment, or components to India.

Question (7)(e). India agreed to safeguards in perpetuity, but also said that they would be "India-specific" safeguards. India added that safeguards on its spent fuel reprocessing facility would be "in a campaign mode."

Would either the administration's proposed legislation or its proposed NSG resolution prevent the United States or other countries from providing assistance to this facility?

Answer. The NPT, NSG Guidelines, and, in the case of the United States, provisions of U.S. domestic law which the proposed legislation does not seek to waive, permit the supply of equipment and components only to facilities under IAEA safeguards in India.

The current NSG Guidelines only allow for transfers of Trigger List items for peaceful purposes to non-nuclear weapon states with full-scope IAEA safeguards in place, unless there is an imminent radiological hazard that cannot be otherwise met (the safety exemption), or if the arrangement is grandfathered. Even in those rare cases, the facility would still have to be safeguarded.

Thus, supply of such items to the PREFRE reprocessing facility could only take place if PREFRE were under IAEA safeguards at the time of supply. If India wished to then reprocess unsafeguarded spent fuel in an unsafeguarded campaign mode, it would have an obligation to the supplier under the terms of supply to remove any such supplied components or equipment from PREFRE before operating the facility in that mode. Removal would not appear to be a practical option if the components or equipment were important to the operation of the plant. Moreover, as a matter of policy, the United States does not intend to supply enrichment or reprocessing technology, equipment, or components to India. We expect that the bilateral agreement for peaceful nuclear cooperation with India will reflect this.

Question (8)(a). In response to a question for the record from the committee's hearing of November 2, 2005, regarding the CIRUS reactor, you stated: "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." This principle would appear to be called into question, however, by the discussion (in the separation plan document tabled in the Indian Parliament on March 7, 2006) of a tie between safeguards and uninterrupted foreign fuel supply.

Will all spent fuel from safeguarded reactors be safeguarded?

Answer. While India has indicated that it intends to continue campaign mode operation of particular downstream facilities, it has

agreed to safeguards in perpetuity on its civil reactors, including on nuclear material used or produced in those facilities.

Question (8)(b). In response to a question for the record from the committee's hearing of November 2, 2005, regarding the CIRUS reactor, you stated: "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." This principle would appear to be called into question, however, by the discussion (in the separation plan document tabled in the Indian Parliament on March 7, 2006) of a tie between safeguards and uninterrupted foreign fuel supply.

What prior approval rights will the United States have regarding the disposition of spent fuel derived from U.S.-provided reactor fuel?

Answer. We are proposing to waive only section 123(a)(2)—the full-scope IAEA safeguards requirement—of the conditions and controls required by Section 123(a) of the Atomic Energy Act (AEA) to be included in an agreement for peaceful nuclear cooperation. We are seeking to include in the agreement to be negotiated with India the approval rights required, inter alia, by AEA section 123(a)(7), which would include a U.S. right to approve the reprocessing or other alteration in form or content of spent fuel subject to the agreement, and by AEA section 123(a)(5), which would include a U.S right to approve the retransfer of U.S.-obligated spent fuel from India to a third country for reprocessing or other disposition. It should be noted that these U.S. consent rights would apply not just to spent fuel derived from U.S.-provided reactor fuel, but to any spent fuel in a U.S.-supplied reactor, even if the fresh fuel had been India's own or supplied by a third party. (Strictly speaking, the U.S. retransfer approval right would apply only to the special nuclear material produced in the non-U.S.-obligated fresh fuel through the use of the U.S.-supplied reactor; but as a practical matter it would affect the entirety of the spent fuel prior to reprocessing.)

Question (9)(a). India's separation plan document also said that safeguards would be tied to an uninterrupted supply of reactor fuel and provide "for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies," and that the United States would help India to create a nuclear fuel reserve for use in case there was any interruption in supply.

What, exactly, did the United States agree to, regarding reactor fuel supplies for India? Is the separation plan document tabled in the Indian Parliament on March 7, 2006, an accurate record of the agreement?

Answer. The Indian separation plan presented to the Indian Parliament on March 7 is India's plan. While that is not a U.S.-origin document, and while we would have presented particular issues somewhat differently, that document accurately reflects the general discussions between the United States and India. Our negotiators were very clear that, while the U.S. would be willing to provide reasonable fuel assurances designed to counter market imperfec-

tions, fuel assurances are not a "condition" to any of India's commitments under the plan—including, in particular, safeguards in perpetuity.

Specific details in some areas of the separation plan, for example, on an implementation schedule, have not yet been released by India. Other issues have not yet been finally determined, such as those issues which require negotiation with the IAEA. Moreover, particular concerns, such as fuel supply assurances, have been discussed but no detailed agreement has yet been reached; the Indian plan accurately reflects the types of issues we have discussed in this area. Finally, the initial discussions on the bilateral agreement for peaceful nuclear cooperation have only just begun.

Question (9)(b). India's separation plan document also said that safeguards would be tied to an uninterrupted supply of reactor fuel and provide "for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies," and that the United States would help India to create a nuclear fuel reserve for use in case there was any interruption in supply.

How can safeguards be "in perpetuity," if they can be lifted whenever there is an interruption in reactor fuel supply? How does India's approach comport with your answer to a question for the record from the committee's hearing of November 2, 2005, in which you stated: "We do not view a safeguards agreement that would allow India to withdraw facilities or material from safeguards as acceptable?"

Answer. It will be incumbent on India to clarify what it means by the "corrective measures" it claims it may seek should fuel supply become disrupted. India will need to clarify its intent in this respect in its discussions with the IAEA. While India has indicated that it intends to continue campaign mode operation of particular downstream facilities, it has agreed to safeguards in perpetuity on its civil reactors. The U.S. position remains that safeguards must be applied in perpetuity, including on nuclear material used or produced in those facilities. We have just begun to engage with India regarding the details of the question of fuel supplies. We believe that India can be provided with the assurances it seeks for fuel supply without compromising the need for safeguards in perpetuity.

Question (9)(c). India's separation plan document also said that safeguards would be tied to an uninterrupted supply of reactor fuel and provide "for corrective measures that India may take to ensure uninterrupted operation of its civilian nuclear reactors in the event of disruption of foreign fuel supplies," and that the United States would help India to create a nuclear fuel reserve for use in case there was any interruption in supply.

Wouldn't a reactor fuel reserve enable India to ride out any U.S. or international sanctions that might be imposed if some future Indian government were to test or use nuclear weapons, divert U.S. equipment for military purposes, or proliferate nuclear weapons technology? Would it make sense to impose limits on India's use of any fuel reserve?

Answer. Secretary Rice has noted clearly that we "reserve the right" to take appropriate action should India violate our understanding. As we have made clear to the Indian government, the Initiative is contingent on India's continued testing moratorium and compliance with its safeguards arrangements. We believe that the Indian government intends to uphold the continuation of the test moratorium it committed to in the July 18, 2005 Joint Statement, and that it will act in good faith to uphold the safeguards agreements it has committed to undertake with the IAEA.

As indicated above, we have just begun to engage with India regarding the details of any fuel supplies. Any U.S. exports of fuel to India would require an export license from the NRC, the issuance of which must be based in part on a judgment by the Executive Branch that the proposed export will not be inimical to the common defense and security, in accordance with the provisions of the AEA. Such a license could be denied, suspended, or terminated if such a result is legally required or circumstances otherwise warrant.

INDIA'S "URANIUM CRUNCH" AND U.S. NPT OBLIGATIONS

Question (10)(a). K. Subrahmanyam, a prominent Indian strategist, wrote in December that "the country is short of uranium" and that it was necessary to "get imported uranium for" India's power reactors, so as "to conserve all our indigenous uranium for weapon production purposes." But some commentators have questioned this.

To what extent does India lack enough uranium to meet both its civil and military needs over the next 20 years?

Answer. The IAEA recently reported India's estimated uranium stocks to be approximately 95,000 metric tons, predicated on data provided by the Indian government. Of this sum, scientists from India's Department of Atomic Energy estimate that about 54,600 metric tons are reasonably-assured uranium resources, and roughly 40,000 metric tons in probable (but unproven) reserves. A definitive response to the specific question of whether India has enough uranium to meet both its civil and military needs, and when it might run out, can only be provided by the Government of India.

Question (10)(b). K. Subrahmanyam, a prominent Indian strategist, wrote in December that "the country is short of uranium" and that it was necessary to "get imported uranium for" India's power reactors, so as "to conserve all our indigenous uranium for weapon production purposes." But some commentators have questioned this.

Is it true that plutonium production for nuclear weapons requires more uranium than does power production?

Answer. Megawatt for megawatt—yes. Operating a reactor for production of weapons-grade plutonium generally uses more uranium than operating a reactor optimized for production of elec-

[1] IAEA-TECDOC-1463, September 2005.

[2] A.B. Awati and R.B. Grover, "Demand and Availability of Uranium Resources in India," in Recent Developments in Uranium Exploration, Production, and Environmental Issues (Vienna, Austria: International Atomic Energy Agency, September 2005).

tricity. But in terms of entire national programs—no. A modest nuclear power program would use far more uranium than a modest nuclear weapons program. Whereas a modest nuclear power program of several gigawatts electric would require hundreds of tons of uranium per year, a nuclear weapons program may require on the order of several tens of tons of uranium per year to produce several nuclear weapons per year.

Question (10)(c). K. Subrahmanyam, a prominent Indian strategist, wrote in December that "the country is short of uranium" and that it was necessary to "get imported uranium for" India's power reactors, so as "to conserve all our indigenous uranium for weapon production purposes." But some commentators have questioned this.

Won't the U.S. nuclear deal and foreign suppliers of "civil" reactor fuel thus be helping India's nuclear weapons program, by enabling it to conserve its domestic uranium supplies for that purpose?

Answer. The Initiative does not cap Indian nuclear weapons production, but nothing to be provided to India under the Initiative will be used to enhance India's military capability or add to its military stockpile. With or without this Initiative, India is capable of maintaining its existing nuclear arsenal. It has a functioning fuel cycle and demonstrated competence with nuclear technologies.

Based on our discussions with the Indian government, we do not believe that India plans to increase significantly its nuclear weapon production. India seeks to maintain what it calls a "credible minimum deterrent." Relative to its current capabilities, India seeks a much larger civil nuclear energy program to meet its real and growing energy needs. Moreover, a successfully-implemented Civil Nuclear Cooperation Initiative adds considerable incentives to grow its civil nuclear energy sector, since international cooperation will be allowed only with safeguarded facilities.

Question (10)(d). K. Subrahmanyam, a prominent Indian strategist, wrote in December that "the country is short of uranium" and that it was necessary to "get imported uranium for" India's power reactors, so as "to conserve all our indigenous uranium for weapon production purposes." But some commentators have questioned this.

During the negotiations leading up to the July 18 Joint Statement and the March 2 separation offer, did the Department of State seek intelligence estimates of the status of India's nuclear weapons program and the likely impact of this agreement on that program? If so, please arrange for the committee to receive copies of those estimates.

Answer. The Department of State, together with other Executive branch departments and agencies, engaged as appropriate with the Intelligence Community on issues relating to India's nuclear program—both its nuclear energy- and nuclear weapons-related dimensions. These interactions were not in the nature of a National Intelligence Estimate, but rather topical briefings, discussions, and reports.

Question (11)(a). Arguably, the India deal and proposed NSG guidelines changes will enable India to devote all its domestic uranium to military purposes.

What are the implications of that for U.S. compliance with its obligation, under Article I of the Nuclear Non-Proliferation Treaty, "not in any way to assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices?"

Answer. The U.S.-India Initiative is about civil nuclear cooperation, not about India's strategic weapons program. Nothing that we are proposing would violate our NPT obligations, including the Article I obligations cited above. We remain fully committed to upholding all of our NPT obligations.

Under Article I of the NPT, nuclear-weapon states such as the U.S. undertake, inter alia: ". . . not in any way to assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices." Under Article III(2) of the NPT, all state parties undertake not to provide certain nuclear material and equipment to any non-nuclear weapon state (which includes non-parties, such as India) for peaceful purposes unless the nuclear material will be subject to safeguards.

The NPT does not treat peaceful nuclear cooperation under safeguards as assisting a non-nuclear weapon state to manufacture nuclear weapons. Indeed, Article III(2) establishes the basis under which NPT parties may engage in nuclear cooperation with safeguarded facilities in countries that are not parties and do not have full-scope safeguards. The practice of the parties confirms this view, as a number of countries—the United States, Canada, Russia, France, China—have provided fuel to India's safeguarded facilities, both before and after the NPT entered into force (and before and after India's 1974 detonation of a nuclear explosive device). Russia is also currently providing two light water reactors for India's civil nuclear energy program.

In The Nuclear Non-Proliferation Treaty (the leading treatise on the negotiation of the NPT), Mohamed Shaker reached the same conclusion: "Almost any kind of international nuclear assistance is potentially useful to a nuclear-weapon program. However, the application of safeguards to all peaceful nuclear assistance to non-nuclear weapon States, as required by Article III, provides a means to establish and clarify the peaceful purposes of most international nuclear assistance."

This conclusion is also supported by the practice of the parties to the NPT. The U.S. and Canada engaged in nuclear cooperation with India before and after the NPT entered into force. The supply of fuel under facility-specific (INFCIRC/66) safeguards agreements was understood to satisfy our obligations under the NPT. Even after India's 1974 detonation, fuel was provided to India's safeguarded Tarapur reactors by the United States, France, and Russia. Such fuel supply was understood to be consistent with the NPT. The Nuclear Suppliers Group did not make the political decision to adopt full-scope safeguards as a condition of supply until 1992.

The argument that foreign fuel supply could allow India to devote its domestic uranium substantially or even exclusively to its weapons program, should India so desire, does not change this legal conclusion. As previously noted, nothing in the NPT, its negotiating history, or the practice of the parties supports the notion that fuel supply to safeguarded reactors for peaceful purposes could be construed as "assisting in the manufacture of nuclear weapons" for purposes of Article I. Nuclear material and equipment exported by the U.S. would not be involved in any stage of the process of manufacturing nuclear weapons.

In essence, nuclear cooperation under safeguards does not fundamentally differ from other forms of energy cooperation (e.g., oil supply, clean coal technology, alternative fuels). All such energy assistance would arguably relieve India of its reliance on domestic uranium for energy production. Yet such energy assistance clearly could not be viewed as assisting India in the manufacture of nuclear weapons.

Question (11)(b). Arguably, the India deal and proposed NSG guidelines changes will enable India to devote all its domestic uranium to military purposes.

Has the Department prepared or acquired any legal analysis of the implications of this deal for our NPT obligations? If so, please provide copies of such analyses to the committee. If not, please commission such an analysis and provide the results.

Answer. The answer to 11(a) above sets forth the Department's conclusions as to whether the proposed peaceful nuclear cooperation with India is compatible with our NPT obligations. Nothing that we are proposing under this Initiative would violate our NPT obligations.

REGIONAL IMPLICATIONS

Question (12)(a). Indian production of more nuclear weapons could have repercussions in Pakistan and China.

Isn't Pakistan likely to see India's declaration of 8 "military" reactors as a threat? Won't that increase the pressure on Pakistan to increase its own nuclear weapons production?

Answer. We do not believe that enhanced cooperation with India in the civil nuclear area or greater use of nuclear reactors to produce energy for the Indian people will contribute to or accelerate a regional arms race. Indeed, by bringing nearly two-thirds of India's nuclear facilities under safeguards and increasing transparency, the Initiative in effect restricts certain Indian facilities to only producing civil energy—facilities that could otherwise be used for nuclear weapons-related purposes. Without this Initiative, India could use all of its current and planned unsafeguarded reactors for military purposes. With this Initiative, 8 of the 22 thermal power reactors could be used for this purpose.

We have kept the Pakistani government informed about our discussions with India at every appropriate stage. Moreover, both India and Pakistan have publicly and privately indicated their unilateral commitments to pursue only what they term credible minimum deterrents.

Any potential for an Indo-Pakistani arms competition will be determined by bilateral relations between India and Pakistan. We would note that their current bilateral relations appear to be improving. Indian Prime Minister Singh recently offered a treaty of peace, security, and friendship to Pakistan. Pakistan's Foreign Office immediately welcomed the offer as a "positive acknowledgement" of the need to move forward on Kashmir and other bilateral issues, and said that both countries needed to take "bold steps to resolve the outstanding issues." As part of their Composite Dialogue, India and Pakistan are discussing an agreement concerning prevention of nuclear accidents and other confidence building measures.

Question (12)(b). Indian production of more nuclear weapons could have repercussions in Pakistan and China.

Won't India's protection of its nuclear weapons program make it more difficult for China to refrain from assisting Pakistan again?

Answer. China became a party to the Nuclear Non-Proliferation Treaty in 1992; it is obligated under Article I not in any way to assist, encourage, or induce any non-nuclear-weapon state to manufacture or acquire nuclear weapons. China pledged in 1996 not to provide assistance to any unsafeguarded nuclear facilities in any country. As part of its joining the Nuclear Suppliers Group (NSG) in 2004, China disclosed its intention to continue cooperation with Pakistan under the grandfathering exception to the NSG Guideline provisions requiring full-scope safeguards as a condition of nuclear supply. This cooperation would include life time support and fuel supply for the safeguarded Chasma I and II nuclear power plants, supply of heavy water and operational safety service to the safeguarded Karachi nuclear power plant, and supply of fuel and operational safety service to the two safeguarded research reactors at PINSTECH. As a member of the NSG, China has pledged—and is expected—to abide by the NSG Guidelines on the transfers of nuclear equipment, technology and material.

If China did seek to provide additional reactors to Pakistan, it would need NSG accommodation. The NSG operates by consensus, so China would need the support of all other participating governments to proceed. We do not believe that the 45 member states of the Nuclear Suppliers Group would agree to such an accommodation, and we do not support such an Initiative with Pakistan.

Question (13)(a). Pakistan has reacted adversely to the notion that India will get civil nuclear commerce, while Pakistan is denied that benefit.

What repercussions will this have in other policy areas, such as our effort to get Pakistan to crack down on all terrorist groups in that country (rather than just on al Qaeda)?

Answer. There are no indications that the Civil Nuclear Cooperation Initiative will have an impact on other policy areas related to Pakistan. We have kept the Pakistani government informed about our ongoing discussions with India, and explained our reasons for not exploring a similar arrangement with Pakistan. At the same time, we continue to build upon a strong counterterrorism foundation to further extend our relationship with Pakistan. Foreign Sec-

retary Riaz Khan and a delegation will visit Washington in the last week of April to initiate the U.S.-Pakistan Strategic Dialogue. The parties will discuss a broad range of areas for cooperation, including in education, energy, economics, nonproliferation, and other issues.

Pakistan continues to maintain its unilateral commitment to undertake what it calls a "credible minimum deterrent."

Question (13)(b). Pakistan has reacted adversely to the notion that India will get civil nuclear commerce, while Pakistan is denied that benefit.

How will the United States act if China presses for a "Pakistan exception" similar to the "India exception" that the United States proposes in the Nuclear Suppliers Group?

Answer. Of the three states that have never been parties to the Nuclear Non-Proliferation Treaty, India's circumstances are unique. It faces real and growing energy needs; it has an advanced civil nuclear infrastructure and program; it has a solid record in refraining from nuclear exports; and it has made enhanced nonproliferation commitments that, when implemented, will more closely align it with the global nonproliferation mainstream than at any previous time.

The United States is joined by other states, such as France, the United Kingdom, Russia, and Australia, in viewing India as a special case. Because the NSG works on the basis of consensus, any participating government, including the United States, can block consensus on actions by the group. There must be a consensus of all 45 NSG countries in order for there to be an accommodation to the NSG Guidelines for India, or for any other state that may seek such treatment.

Thus, any other NSG participating government that might seek similar accommodations for a partner state—for example, as some have suggested, the hypothetical case of China seeking an accommodation for Pakistan—would need the support of all other participating governments to implement such accommodation. We do not believe that the 45 member states of the Nuclear Suppliers Group would reach consensus on such an accommodation, and we do not support such an Initiative with Pakistan.

While news reports have cited Pakistani officials as also seeking normalization of nuclear trade and commerce, the factors that make the Joint Statement appropriate in India's case are not present in either Pakistan or Israel—and certainly not in NPT violators such as North Korea or Iran.

Question (13)(c). Pakistan has reacted adversely to the notion that India will get civil nuclear commerce, while Pakistan is denied that benefit.

How will the United States act if China makes such a "Pakistan exception" its price for approval of an "India exception" in the NSG?

Answer. We have no information to indicate that the Chinese government is The Proposed Legislation even considering such a position and it would not be prudent to speculate.

THE PROPOSED LEGISLATION

Question (14)(a). Section 1(a) of the proposed legislation begins: "Notwithstanding any other provision of law. . . . "

Why was that phrase included?

Answer. That phrase was used because the provisions of the proposed legislation are intended to supplant certain provisions of existing law that would otherwise apply to peaceful nuclear cooperation with India.

Question (14)(b). Section 1(a) of the proposed legislation begins: "Notwithstanding any other provision of law. . . . "

What other laws do you wish to supersede? Please be specific.

Answer. (1) Section 123 of the Atomic Energy Act of 1954 (AEA) with respect to the congressional action necessary to bring into effect a bilateral agreement for peaceful nuclear cooperation exempted by the President from one or more of the provisions of section 123(a);

(2) Section 128 of the AEA with respect to the requirement for a waiver annually of the requirement that the country to receive a nuclear export under NRC license have IAEA full-scope safeguards; and

(3) Section 129 of the AEA with respect to the procedure and standard for Presidential waiver of the any of the sanctions in section 129.

We have not identified any other current statutory provisions that would be superseded by this provision, but nonetheless wish to ensure that these modifications to the procedures under section 123 and the waiver authority under sections 128 and 129 are effective notwithstanding any provisions of law that would require otherwise.

Question (15)(a). In response to a question for the record from the committee's hearing of November 2, 2005, you stated that " '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."

Why does the administration's proposed legislation not reflect the enrichment and reprocessing limitation?

Answer. The determination in the proposed legislation incorporates elements of the U.S.-India Joint Statement; this was not one of those elements. Moreover, it is not necessary for the legislation to reflect that limitation, which will be embodied in the bilateral agreement for peaceful nuclear cooperation.

Question (15)(b). In response to a question for the record from the committee's hearing of November 2, 2005, you stated that " '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."

Why does its proposed NSG resolution not include such a limit, either?

Answer. The transfer of enrichment and reprocessing equipment and technology is addressed in the NSG Guidelines, INFCIRC/254/Rev.7/Part 1. Therefore, it was not deemed necessary for the proposed resolution to address the matter. We have indicated to our NSG partners that we do not intend to supply enrichment and reprocessing technologies.

Question (15)(c). In response to a question for the record from the committee's hearing of November 2, 2005, you stated that "'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."

What was the final decision regarding heavy water production?

Answer. The U.S. does not foresee transferring heavy water production equipment or technology to India, and the draft bilateral peaceful nuclear cooperation agreement accordingly makes no provisions for such transfers.

While we seek consensus on an accommodation to allow NSG suppliers to enter into peaceful nuclear cooperation with India, including supply of civil nuclear reactors and fuel for nuclear power production, we have no indication of current plans on the part of any of the NSG Participating Governments to transfer heavy water production equipment or technology to India.

Question (16)(a). Paragraph 1(b)(1) of the proposed legislation requires the President to certify that India has provided "a credible plan" for separating civil and military facilities "and has filed a declaration regarding its civil facilities with the IAEA."

Does the administration believe that the March 2 plan meets the first test of that paragraph, even though it does not list all facilities to be declared "civil?"

Answer. With respect to 1(b)(1), India's plan to separate its civil and military facilities and plans has been submitted to the U.S. Government and in our view meets this criterion. For it to be credible and defensible from a nonproliferation standpoint, it had to capture more than just a token number of Indian nuclear facilities, which it did by encompassing nearly two-thirds of India's current and planned thermal power reactors as well as all future civil thermal and breeder reactors. Importantly, for the safeguards to be meaningful, India had to agree to apply IAEA safeguards in perpetuity; it did so. Once a reactor is under IAEA safeguards, it will remain there permanently and without any conditions. Further, in our view the plan also needed to include the upstream and downstream facilities associated with the safeguarded reactors to provide a true separation of civil and military programs. India committed to these steps, and we have concluded that its separation plan meets the criteria established: it is credible, transparent, and defensible from a nonproliferation standpoint.

Question (16)(b). Paragraph 1(b)(1) of the proposed legislation requires the President to certify that India has provided "a credible plan" for separating civil and military facilities "and has filed a declaration regarding its civil facilities with the IAEA."

Will a declaration filed with the IAEA meet the second test, if it is not yet complete?

Answer. We fully expect that India in the near future will provide the IAEA with a detailed list of all civil facilities, along with anticipated timelines for the application of safeguards to those facilities. Senator Joseph R. Biden (#17a) Question:The Proposed Legislation

Question (17)(a). Paragraph 1(b)(2) of the proposed legislation requires the President to certify that an agreement between India and the IAEA has entered into force "requiring the application of safeguards in accordance with IAEA practices to India's civil nuclear facilities...."

Would safeguards "in a campaign mode" be "in accordance with IAEA practices?"

Answer. As noted in the answer to 7c, safeguards have been applied in this mode before to the Tarapur reprocessing plant.

Question (17)(b). Paragraph 1(b)(2) of the proposed legislation requires the President to certify that an agreement between India and the IAEA has entered into force "requiring the application of safeguards in accordance with IAEA practices to India's civil nuclear facilities...."

Would safeguards tied to uninterrupted reactor fuel supply be "in accordance with IAEA practices?"

Answer. Except for the facility-specific agreements already in place, India's safeguards agreement has not yet been negotiated with the IAEA. The U.S. position remains that safeguards must be applied to India's civil nuclear facilities in perpetuity. We have had discussions with India regarding the question of fuel supplies, and those discussions will continue. We believe that India can be provided with appropriate fuel supply assurances without compromising the requirement that there be safeguards in perpetuity.

Question (18)(a). Paragraph 1(b)(3) of the proposed legislation requires the President to certify that "India and the IAEA are making satisfactory progress toward implementing an Additional Protocol that would apply to India's civil nuclear program."

Does the administration interpret that paragraph as requiring that an Additional Protocol have been signed or ratified? Or would ongoing negotiations suffice?

Answer. The administration would prefer that India sign an Additional Protocol with the IAEA prior to the initiation of civil nuclear cooperation, but does not expect an Additional Protocol to be signed prior to submitting the bilateral agreement for peaceful nuclear cooperation to the U.S. Congress. Under the language of paragraph 1(b)(3), it would be a judgment call for the President whether the progress achieved by India and the IAEA in working out the terms of an Additional Protocol was satisfactory. This approach takes account of the fact that India's Additional Protocol will necessarily be tailored to its safeguards agreement, and therefore is likely to be negotiated after that safeguards agreement. Implementation of the Additional Protocol may also take some time.

Question (18)(b). Paragraph 1(b)(3) of the proposed legislation requires the President to certify that "India and the IAEA are making satisfactory progress toward implementing an Additional Protocol that would apply to India's civil nuclear program."

What standards has the administration suggested for an Indian Additional Protocol with the IAEA?

Answer. The negotiation of the terms of an Additional Protocol will be a matter between India and the IAEA. The negotiated document will need to be approved by the IAEA Board of Governors, which includes the United States.

Since India will have a military nuclear program that it does not declare to the IAEA, its Additional Protocol would differ from the Model Additional Protocol. Nevertheless, it should advance the IAEA's ability to track potential nuclear proliferation worldwide. In that regard, reporting of exports listed in Annex II of the Model Additional Protocol would be of greatest value. India has pledged to conclude an Additional Protocol with respect to its civil facilities, and the Model Additional Protocol has provisions that deal with the "sites" of nuclear facilities. India has also listed as civil a number of research and development and other facilities that would not normally be subject to safeguards, but could be subject to the reporting and access provisions of an Additional Protocol.

Question (18)(c). Paragraph 1(b)(3) of the proposed legislation requires the President to certify that "India and the IAEA are making satisfactory progress toward implementing an Additional Protocol that would apply to India's civil nuclear program."

Could "satisfactory progress" be achieved if the Additional Protocol were similar to China's very limited protocol, rather than to the one the United States has signed?

Answer. India pledged in the July 2005 Joint Statement to conclude an Additional Protocol with respect to its civil nuclear facilities. This goes beyond what is included in China's Additional Protocol, which covers only certain cooperation with other countries. China, of course, is recognized as a nuclear weapon state, while India is not. The details of India's Additional Protocol remain to be determined and negotiated between India and the IAEA. Like India's safeguards agreement, the Additional Protocol to that agreement would be tailored to India's specific circumstances.

Question (19). Paragraph 1(b)(5) of the proposed legislation requires the President to certify only that "India is supporting international efforts to prevent the spread of enrichment and reprocessing technology." Don't we want India to commit more specifically not to provide enrichment or reprocessing technology to any country that does not already have a full-up capability?

Answer. Paragraph 1(b)(5) captures part of the Indian commitment with regard to enrichment and reprocessing technology as expressed in the July 18, 2005 Joint Statement (i.e., to "support international efforts to prevent the spread of enrichment and reprocessing technology.") We expect India to fulfill the other part of this Joint Statement commitment as well by refraining from the

transfer of enrichment and reprocessing technologies to states that do not already have them.

Question (20)(a)–(c). David Albright of the Institute for Science and International Security warns that Indian procurement tenders for equipment to be used in its own uranium enrichment facility can be used by other countries to learn how to produce components for such a facility.

(a) What do you make of his findings?

(b) What are the implications of the fact that one or more firms in the A.Q. Khan network also assisted India?

(c) What is the administration doing to convince India to act more responsibly in its procurement of equipment for its nuclear weapons program?

Answer. We would be happy to discuss these allegations in a classified setting, as appropriate.

Question (21)(a). Paragraph 1(b)(6) of the proposed legislation requires the President to certify that India "is ensuring that the necessary steps are being taken to secure nuclear materials and technology" through "the application" of new laws and regulations and through "harmonization and adherence to" NSG and MTCR guidelines.

Why not require that India's laws and regulations be as good as ours?

Answer. The practice of states is to seek conformity to established international standards, and India has agreed to meet those international standards with respect to the NSG and MTCR. This approach is reflected in the guidelines of the various supplier groups, including the NSG and MTCR. UN Security Council Resolution 1540 establishes a mechanism for achieving this goal. This widely accepted approach was taken with India.

Question (21)(b). Paragraph 1(b)(6) of the proposed legislation requires the President to certify that India "is ensuring that the necessary steps are being taken to secure nuclear materials and technology" through "the application" of new laws and regulations and through "harmonization and adherence to" NSG and MTCR guidelines.

Why is there no mention of "enforcement," as opposed to the more ambiguous word "application?"

Answer. In the context of this Presidential determination, the term "application" would have the same meaning and effect as "enforcement."

Question (22)(a). Paragraph 1(b)(7) of the proposed legislation requires the President to certify that supply to India "is consistent with United States participation in the Nuclear Suppliers Group."

What does that mean?

Answer. The language of 1(b)(7) requires an objective determination that peaceful nuclear cooperation with India is consistent with our status as a member of the Nuclear Suppliers Group (NSG), including our commitment to adhere to the NSG Guidelines. This

means that the NSG will have to have made a policy decision to accommodate such civil nuclear cooperation with India. Such decisions are taken by consensus of all 45 member states.

Question (22)(b). Paragraph 1(b)(7) of the proposed legislation requires the President to certify that supply to India "is consistent with United States participation in the Nuclear Suppliers Group."

Would the administration be able to make such a certification absent a formal NSG decision, adopted by consensus, to permit such supply to India?

Answer. We will not undercut the NSG. Consistent with NSG Guidelines, Participating Governments of the NSG act by consensus. It would not be appropriate to speculate on the nature or timing of members' action to address the question of nuclear supply to India. Paragraph 1(b)(7) reflects this context, including the understanding that the NSG will operate on a consensus basis.

Question (22)(c). Paragraph 1(b)(7) of the proposed legislation requires the President to certify that supply to India "is consistent with United States participation in the Nuclear Suppliers Group."

If one or more countries were to hold out against a change in the guidelines, could the administration (perhaps with the support of other countries) reinterpret NSG rules to allow an informal "India exception" to go into effect?

Answer. As previously noted, paragraph 1(b)(7) is based on the understanding that the NSG operates on a consensus basis.

Question (23)(a). Subsection 1(d) of the proposed legislation says: "A determination under subsection (b) shall not be effective if the President determines that India has detonated a nuclear explosive device after the date of enactment of this Act."

What is the effect of this provision?

Answer. Under the proposed legislation, if the President made the determination in subsection 1(b), the operation of certain requirements of the Atomic Energy Act would be modified with respect to U.S.-India civil nuclear cooperation. However, subsection 1(d) provides that the President's determination "shall not be effective" in modifying the operation of these legal requirements if India is found to have detonated a nuclear explosive device after enactment of the legislation. In other words, if India detonated a device after enactment of the legislation, U.S.-India civil nuclear cooperation would be subject to the Atomic Energy Act without modification. However, previously completed transactions (e.g., nuclear exports that were legal when made) would not be rendered invalid. Issues relating to the "right of return" of any such exports would be subject to the bilateral agreement for peaceful nuclear cooperation.

Detonation would also invalidate the waiver under Brownback II (P.L. 106-79, section 9001). This would reinstate a wide range of sanctions under the Glenn amendment (Arms Export Control Act, section 102(b)), as well as sanctions under the Export-Import Bank Act (section 2(b)(4)).

Question (23)(b). Subsection 1(d) of the proposed legislation says: "A determination under subsection (b) shall not be effective if the President determines that India has detonated a nuclear explosive device after the date of enactment of this Act."

If India were to conduct a nuclear test after the date of enactment, but before the submission to Congress of a peaceful nuclear cooperation agreement, would such an agreement once again require a Presidential waiver under section 128 of the Atomic Energy Act?

Answer. Any waiver of section 128 based on the proposed legislation would become ineffective upon a finding of detonation. Any subsequent NRC licensing of nuclear exports to India would be subject to section 128 without modification, as set forth in the Atomic Energy Act. The timing of any Indian nuclear test (before or after submission of the agreement for nuclear cooperation) would not affect this outcome.

Question (23)(c. Subsection 1(d) of the proposed legislation says: "A determination under subsection (b) shall not be effective if the President determines that India has detonated a nuclear explosive device after the date of enactment of this Act."

If India were to conduct a nuclear test after the submission to Congress of a peaceful nuclear cooperation agreement, but before its entry into force, would that agreement require the approval of both houses of Congress?

Answer. Indian detonation of a nuclear explosive device would be inconsistent with the fundamental premises of the U.S.-India Civil Nuclear Cooperation Initiative, including India's commitment under the July 18, 2005 Joint Statement to continue its unilateral nuclear testing moratorium which India has had in place since 1998. We believe India takes this commitment seriously, and that it intends to uphold it.

Should India nonetheless take such action while Congress was engaged in reviewing the bilateral peaceful nuclear cooperation agreement, the political conditions necessary to bring that agreement into force would no longer exist. In addition, as a legal matter, Congressional review of the agreement would no longer be subject to the proposed legislation, but would be subject to section 123 of the Atomic Energy Act without modification.

Question (23)(d). Subsection 1(d) of the proposed legislation says: "A determination under subsection (b) shall not be effective if the President determines that India has detonated a nuclear explosive device after the date of enactment of this Act."

If India were to conduct a nuclear test after a peaceful nuclear cooperation agreement had entered into force, would the peaceful nuclear cooperation agreement be null and void? Or would it remain in effect?

Answer. The bilateral peaceful nuclear cooperation agreement would remain in effect as a matter of international law. However, exports of nuclear equipment and material to India under that agreement would be prohibited under section 129 of the Atomic Energy Act (which provides for such a prohibition if a country detonates a nuclear explosive device); any prior waiver of section 129

based on a Presidential determination under the proposed legislation would no longer be effective.

Question (24)(a)–(c) How would the implementation of a peaceful nuclear cooperation agreement be affected if India were to engage in other conduct of concern, such as diversion of U.S. equipment or proliferation of nuclear weapons technology, if India were to suspend or end its phased separation of nuclear facilities, which will stretch out until 2014, or if India were to end or suspend its acceptance of IAEA safeguards?

(a) Would all nuclear-related export licenses be suspended?

(b) Would equipment or material received from the United States have to be returned?

(c) Would India become subject to any fines or other penalties?

Answer. Since the U.S.-India agreement for peaceful nuclear cooperation is under negotiation, it is premature to discuss how specifically it will be implemented. However, administration officials have told Congress that we are seeking an agreement that satisfies all current requirements of U.S. law except for the full-scope IAEA safeguards requirement in section 123(a)(2) of the Atomic Energy Act (AEA). Section 123(a)(4) of the AEA—hich will be applicable—rovides that any agreement for peaceful nuclear cooperation with a non-nuclear weapon state (which an agreement with India would be, in accordance with U.S. law) must include "a stipulation that the United States shall have the right to require the return of any nuclear materials and equipment transferred pursuant thereto and any special nuclear material produced through the use thereof if the cooperating party detonates a nuclear explosive device or terminates or abrogates an agreement providing for IAEA safeguards."

In addition, such activities by India would likely trigger a cutoff of nuclear cooperation under section 129 of the AEA. The proposed legislation would allow for waiver of this prohibition based on the Presidential determination in subsection 1(b). In this regard, the President would take into account that the activities described in the question would likely call into question the fundamental premises upon which the Civil Nuclear Cooperation Initiative is based.

In addition, several nonproliferation sanctions laws provide for measures against countries that: detonate a nuclear explosive device; terminate, abrogate, or materially violate a safeguards agreement with the IAEA; or materially violate a nuclear cooperation agreement with the U.S. (See section 102(b) of Arms Export Control Act; section 2(b)(4) of Export-Import Bank Act; section 530 of Foreign Relations Authorization Act (P.L. 103-236)).

Question (25)(a). The administration's proposed legislation would exempt India from the provisions of section 123 of the Atomic Energy Act. Under current law, given that the President would have to waive the requirement of section 123.a(2) of that Act, such an agreement would require approval by both houses of Congress.

Under this proposed legislation, could Congress stop such an agreement unless, within 60 days of continuous session, it enacted a joint resolution of disapproval, including voting to override a Presidential veto?

Answer. Congress would have 90 days of continuous session to enact legislation disapproving the agreement for cooperation. If the President vetoed the legislation and Congress wanted nonetheless to disapprove, it would be able to vote on whether to override.

Question (25)(b). The administration's proposed legislation would exempt India from the provisions of section 123 of the Atomic Energy Act. Under current law, given that the President would have to waive the requirement of section 123.a(2) of that Act, such an agreement would require approval by both houses of Congress.

Does the administration intend to submit a peaceful nuclear cooperation agreement that would require the waiver of any requirement other than that in section 123.a(2)? If so, please explain.

Answer. No. The administration intends to submit an agreement for peaceful nuclear cooperation that satisfies the requirements set forth in section 123(a) of the AEA with the sole exception of section 123(a)(2). The draft legislation proposed by the administration would also provide for a Presidential waiver, on the basis of specified determinations, of provisions of AEA sections 128 and 129 in the specific case of India.

GUARDING AGAINST DIVERSION OF CIVIL COMMERCE TO MILITARY PURPOSES

Question (26)(a). The Indian separation offer puts some Canadian-type reactors under safeguards and leaves others of the same type declared "military." It also proposes only intermittent safeguards over the spent fuel reprocessing facility and perhaps, if there were imported fuel interruptions, over reactors as well.

Under these circumstances, how can the United States ensure that nuclear equipment or technology sold to India is not diverted or otherwise assists its nuclear weapons program?

Answer. The IAEA safeguards required by this Initiative are designed to detect, with a view to preventing, the diversion to military use of any materials, technologies, or equipment provided to India's civil nuclear facilities.

The United States and other suppliers will insist that nuclear items supplied to India, and special nuclear material produced through their use, remain under IAEA safeguards. This is a separate issue from whether India will maintain IAEA safeguards in perpetuity on the facilities on its civil list. While India has not yet completed negotiations with the IAEA, the U.S. position is well-known.

Question (26)(b). The Indian separation offer puts some Canadian-type reactors under safeguards and leaves others of the same type declared "military." It also proposes only intermittent safeguards over the spent fuel reprocessing facility and perhaps, if there were imported fuel interruptions, over reactors as well.

Did the administration obtain any intelligence analysis on this matter? If so, please arrange for the committee to receive copies of such analysis.

Answer. The Intelligence Community has considered this issue, and has already briefed Senate Foreign Relations Committee and other Congressional staff. We would be happy to further discuss this and other related issues in a classified session, as appropriate.

*Question (26)(c).*The Indian separation offer puts some Canadian-type reactors under safeguards and leaves others of the same type declared "military." It also proposes only intermittent safeguards over the spent fuel reprocessing facility and perhaps, if there were imported fuel interruptions, over reactors as well.

Will the United States have clear rights to inspect Indian use of U.S. exports? Should there be similar requirements in an NSG context?

Answer. The U.S. and other NSG members rely on IAEA inspection and monitoring at facilities where IAEA safeguards are being applied, which will be the only facilities to which U.S. or internationally-supplied nuclear technology, equipment, and material will be transferred. Moreover, an Additional Protocol will provide for broadened IAEA access to facilities and information regarding nuclear-related activities. These steps are designed to detect, with a view to preventing, diversion of any civil nuclear cooperation to India's military program.

Question (26)(d). The Indian separation offer puts some Canadian-type reactors under safeguards and leaves others of the same type declared "military." It also proposes only intermittent safeguards over the spent fuel reprocessing facility and perhaps, if there were imported fuel interruptions, over reactors as well.

How much additional funds will the IAEA need for safeguards? How much of that amount will India pay? Will the United States have to put up more money for this?

Answer. Under the Indian separation plan announced in March, the major additional facilities that would come under safeguards will be 10 reactors: 8 heavy-water reactors and 2 Russian-supplied light-water reactors, which will be placed under safeguards between 2006 and 2014. Moreover, while no specific plans have been announced, the Indian government has indicated that it will also seek to purchase additional civil reactors over the next several years and all such reactors will come under safeguards.

Safeguards costs are difficult to estimate precisely, but in the past the IAEA has ascribed direct safeguards costs (staff time, cost of travel, cost of equipment used in inspections, cost of sample analysis) to similar heavy water reactors of about $200,000—250,000 per year per facility, and about $50,000 per year per facility for light water reactors.

The total safeguards budget of the IAEA for 2004 was about $100 million. As a general rule, safeguards applied subject to legally binding agreements are paid for out of the IAEA's general budget, to which all member states contribute. In a number of cases states, or groups of states such as EURATOM, have voluntarily shared

some safeguards costs with the Agency, for example by purchasing equipment installed in facilities in those states.

THE NSG AND ASSURING A LEVEL PLAYING FIELD FOR AMERICAN COMPANIES

Question (27)(a). What was China's reaction to the U.S. proposal at the NSG consultative group meeting in Vienna?

Answer. Since NSG deliberations are generally of a confidential nature, we would be happy to brief the committee in an appropriate setting on our discussions with NSG partners, including China, regarding the U.S. proposal to accommodate civil nuclear cooperation with India.

Question (27)(b). Is it true that some states suggested not lifting restrictions on nuclear trade with India until it stops fissile material production for weapons and signs the Comprehensive Test-Ban treaty? If so, which states were these?

Answer. NSG members have discussed many specific issues in this context, including the prospect for India suspending fissile material production or signing the Comprehensive Test Ban Treaty. Since NSG deliberations are generally of a confidential nature, we would be happy to brief the committee in an appropriate setting on our discussions with NSG partners regarding the U.S. proposal to accommodate civil nuclear cooperation with India.

Question (28). The draft proposal that the United States submitted to the NSG experts meeting would enter into force as soon as it was adopted by the NSG. But U.S. firms would be unable to sell to India until a peaceful nuclear cooperation agreement entered into force. That could give foreign firms a head start of many months, considering that an agreement with India has not even been negotiated. How should the timing of U.S. action and NSG action be adjusted so that companies from all countries get to make sales at about the same time?

Answer. In part to ensure that U.S. firms are not disadvantaged with respect to their foreign competitors, we are moving forward in parallel on the measures that are required for the civil nuclear cooperation to commence: (a) obtaining NSG consensus on civil nuclear cooperation with India, (b) the negotiation of a U.S.–India agreement for peaceful nuclear cooperation, and (c) Congressional consideration of the Initiative and any necessary legislative changes. While it is not possible to ensure that these separate actions occur at the same time, in order to ensure a level playing field for U.S. business, we believe in principle that Congressional action should precede NSG action.

Question (29)(a). The U.S. proposal to the NSG would allow each member to approve sales to "safeguarded civil nuclear facilities in India as long as the participating Government intending to make the transfer is satisfied that India continues to fully meet" its commitments under the July 18 Joint Statement.

Why should other countries become independent judges of how faithfully India was fulfilling commitments made to the United

States? Why not require suppliers to consult with the United States, or with the NSG, on the question of whether India continues to fully meet its commitments?

Answer. As is the case with all of the multilateral nonproliferation regimes, implementation of the NSG Guidelines by Participating Governments, including nuclear export approvals, is a matter of national discretion, and subject to each Participating Government's national laws, regulations, and policies. Participating Governments make a political commitment to have in place laws and regulations that ensure effective implementation of the NSG Guidelines. The NSG Guidelines also call for consultations regarding implementation of the Guidelines, especially in sensitive cases.

After a consensus policy decision is reached in the NSG context to allow nuclear cooperation with India, it would be up to each supplier to continue to satisfy itself that India continued to meet its various nonproliferation and safeguards commitments. If a supplier developed a concern that the criteria were not being met, then the supplier would be expected to raise the issue in the NSG with other partners.

Question (29)(b). The U.S. proposal to the NSG would allow each member to approve sales to "safeguarded civil nuclear facilities in India as long as the participating Government intending to make the transfer is satisfied that India continues to fully meet" its commitments under the July 18 Joint Statement.

Why did you not exclude enrichment and reprocessing facilities from those to which sales could be made? Under this NSG proposal, could sales be made to the reprocessing facility that is used for both civil and military purposes?

Answer. Within the NSG, there has been no discussion of possible transfers of enrichment and reprocessing technology to India or any Indian requests for such technology. As indicated above, we do not intend to transfer such technology, and our bilateral agreement for peaceful nuclear cooperation will reflect this. Moreover, NSG Participating Governments have made clear that they currently are not contemplating any new transfers of enrichment and reprocessing technology and in fact have been considering strengthening controls over such transfers.

Transfers of reprocessing equipment or technology for use in an unsafeguarded Indian reprocessing facility that is used for military purposes would not be permissible under the NPT, the NSG Guidelines, or U.S. law.

With respect to possible transfers to an Indian reprocessing facility that is used alternately for military and civil purposes, and that is intermittently under IAEA safeguards (i.e., when being used for a civil purpose), as noted in our answer to question 7(e), the supply of items could only take place if the facility were under safeguards at the time of supply. Therefore, if India wished to then reprocess unsafeguarded spent fuel in an unsafeguarded campaign mode, it would have an obligation to the supplier under the terms of supply to remove any such supplied components or equipment from the facility before operating the facility in that mode. Removal would not appear to be a practical option if the components or equipment

were important to the operation of the plant. Moreover, as a matter of policy, the United States does not intend to supply enrichment or reprocessing technology, equipment, or components to India.

Question (30). What is the administration's position on Russia's recent proposal to supply fuel to the Tarapur reactors, which the administration opposed in 2001?

Answer. We expressed our strong disappointment to both Russia and India regarding the Russian decision to once again, as in 2001, supply nuclear fuel to the Tarapur reactors. The United States and the great majority of other NSG Participating Governments strongly disagreed with the Russian position that the safety exemption to the full-scope safeguards supply policy in the NSG Guidelines applied to Tarapur. We also expressed concern to both Russia and India that the Russian decision to supply without prior NSG consultation would lead NSG Participating Governments to be less open-minded when considering the U.S. proposal for civil nuclear cooperation with India.

STATEMENTS BY UNDER SECRETARY BURNS

Question (31)(a). Secretary Burns, you told the U.S. Chamber of Commerce on March 14 that "India has . . . promised that all of the upstream and downstream nuclear research facilities . . . shall come under safeguards." But the separation plan document tabled in the Indian Parliament on March 7, 2006, did not contain a full list of such facilities.

Where is India's promise made clear?

Answer. In paragraph 14 of India's separation plan, sections (v) and (vi) address the issue of upstream and downstream facilities. To date, a full list of the facilities to be safeguarded has not been made public by the Indian government. We fully expect that India will make such a list available in the near future.

Question (31)(b). Secretary Burns, you told the U.S. Chamber of Commerce on March 14 that "India has . . . promised that all of the upstream and downstream nuclear research facilities . . . shall come under safeguards." But the separation plan document tabled in the Indian Parliament on March 7, 2006, did not contain a full list of such facilities.

Will you provide the committee with the negotiating record of this agreement, so that we can understand precisely what the two parties have agreed to?

Answer. We would be happy to brief the committee on our understanding of the scope of the undertakings in the U.S.-India Civil Nuclear Cooperation Initiative, including discussions between the U.S. and India related to it.

Question (31)(c). Secretary Burns, you told the U.S. Chamber of Commerce on March 14 that "India has . . . promised that all of the upstream and downstream nuclear research facilities . . . shall come under safeguards." But the separation plan document tabled in the Indian Parliament on March 7, 2006, did not contain a full list of such facilities.

Has India also promised that the fuel used in its civil reactors and the spent fuel removed from them will be under safeguards?

Answer. Under the Initiative, India has committed to place its current and planned civil reactors under IAEA safeguards. The fuel used in all the reactors designated as civil will be safeguarded after entry into force of the safeguards agreement with respect to that facility, and the safeguards will follow the material if it is removed from the reactor facility (for example, to a repository). Under current arrangements, India's four safeguarded reactors and associated spent fuel are already under IAEA safeguards. We would not expect that spent fuel that was removed from civil reactors before the Initiative goes into effect and IAEA safeguards are applied would be safeguarded.

Question (31)(d). Secretary Burns, you told the U.S. Chamber of Commerce on March 14 that "India has . . . promised that all of the upstream and downstream nuclear research facilities . . . shall come under safeguards." But the separation plan document tabled in the Indian Parliament on March 7, 2006, did not contain a full list of such facilities.

If so, why is only one spent fuel repository noted in the plan tabled in India's Parliament?

Answer. Spent fuel pools are for temporary storage of spent fuel. Most spent fuel pools are located at reactors and considered part of the reactor facility, but the two specifically identified in India's separation plan—paragraph 14, section (vi)—are "away from reactor" spent fuel storage pools that would also be safeguarded. We would expect that spent fuel storage pools of reactors declared as civil would be safeguarded, consistent with IAEA practice. (Separate, away-from-reactor spent fuel storage facilities would be safeguarded if they contain safeguarded spent fuel from civil reactors.)

Question (32)(1). Secretary Burns, you told the U.S. Chamber of Commerce that "India has decided—to adhere to the Australia Group and the Wassenaar Arrangement." That would be an important, positive step; India has previously declined to bar chemical weapons-usable exports unless the items were on the smaller lists in the Chemical Weapons Convention.

Has any Indian official announced this decision?

Answer. We have discussed with India the importance of India harmonizing its control lists with those of the Australia Group and Wassenaar Arrangement. To date, we have not received an official announcement by the Indian government indicating it has harmonized its control lists or unilaterally adhered. We continue to discuss these issues with the Indian government in the context of our bilateral discussions.

Question (32)(b). Secretary Burns, you told the U.S. Chamber of Commerce that "India has decided—to adhere to the Australia Group and the Wassenaar Arrangement." That would be an important, positive step; India has previously declined to bar chemical weapons-usable exports unless the items were on the smaller lists in the Chemical Weapons Convention.

Can you provide the committee any paper that documents this decision?

Answer. We will inform Congress of any developments concerning India's harmonization or unilateral adherence as they occur.

Question (32)(c). Secretary Burns, you told the U.S. Chamber of Commerce that "India has decided—to adhere to the Australia Group and the Wassenaar Arrangement." That would be an important, positive step; India has previously declined to bar chemical weapons-usable exports unless the items were on the smaller lists in the Chemical Weapons Convention.

Has India prepared legislation to conform its export control law to those regimes? Are you assisting India in that regard?

Answer. India's May of 2005 "Weapons of Mass Destruction and Their Delivery Systems (Prohibition of Unlawful Activities) Act" (WMD Act) and subsequent implementing regulations greatly strengthen India's export control capabilities. On the whole, the Act and implementing regulations bring Indian export controls closer in line with widely accepted export control standards for preventing WMD proliferation and are consistent with the kinds of measures that UNSCR 1540 requires states to implement. We continue to discuss with the Indian government the steps for bringing its export control standards and practices fully in line with those of the international regimes, including issues relating to implementation and enforcement. We also continue to engage with India in cooperative programs under the Export Control and Related Border Security (EXBS) program.

TEXTS OF AGREEMENTS

Question (33)(a). Please provide to the committee copies of any signed or initialed documents between the United States and India on this matter.

Please provide also any agreed minutes, exchanges of letters, or memoranda documenting each country's understanding of the agreements that have been reached.

Answer. The U.S.-India Civil Nuclear Cooperation Initiative is set out in the July 18, 2005 and March 2, 2006 Joint Statements, which are political statements and were neither signed nor initialed. The separation plan was not a bilateral document, but a unilateral document issued by India, following discussions with the United States. There are no other documents of the sort described in the question.

Question (33)(b). Please provide to the committee copies of any signed or initialed documents between the United States and India on this matter.

Please also provide, and up-date periodically, the rolling text of the U.S.-India peaceful nuclear cooperation agreement.

Answer. We have begun initial discussions on the bilateral agreement for peaceful nuclear cooperation with India. We would be happy to arrange briefings for the committee on the outlines of

what is contained in the text. In this regard, we note that the texts of the section 123 agreements with non-nuclear weapon states that are currently in force and previously reviewed by Congress are illustrative of the content we are seeking in an agreement with India (with the exception of a provision for full-scope IAEA safeguards in India). Congress will have an opportunity to fully review the agreement once negotiations are complete and the agreement has been submitted for congressional review.

VII.—HEARING OF THE U.S. SENATE COMMITTEE ON FOREIGN RELATIONS, APRIL 5, 2006

U.S.-INDIA ATOMIC ENERGY COOPERATION: THE INDIAN SEPARATION PLAN AND THE ADMINISTRATION'S LEGISLATIVE PROPOSAL

WEDNESDAY, APRIL 5, 2006,

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

The committee met, pursuant to notice, at 9:32 a.m. in Room SH-216, Hart Senate Office Building, Hon. Richard G. Lugar, chairman of the committee, presiding.

Present: Senators Lugar [presiding], Chafee, Allen, Alexander, Biden, Sarbanes, Kerry, Feingold, Boxer, Bill Nelson, and Obama.

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

The CHAIRMAN. This meeting of the Senate Foreign Relations Committee is called to order.

The committee meets today to examine the United States-India Civilian Nuclear Agreement. The Indian Nuclear Agreement is one of the most ambitious foreign policy initiatives to come before Congress in many years. In view of the importance of the committee's work on this agreement, we're especially pleased to welcome Secretary of State Condoleezza Rice. We look forward to this public opportunity to explore, in depth, the agreement and its implications.

Last Wednesday, the committee met in closed session with Under Secretary Nick Burns and Under Secretary Bob Joseph to hear the Bush administration's views with regard to the India Nuclear Agreement. The briefing was well attended, and members listened carefully to the presentation. The briefing encompassed a broad range of topics, but I believe we have only scratched the surface of this intricate agreement and the national security questions it has raised. Indeed, some months ago, I submitted to the State Department 82 questions related to the agreement as the initial step toward establishing a dialogue that would help Congress make an informed decision. The State Department has provided answers to all 82 of these questions. A copy of this lengthy exchange has been provided to members of the committee, and it can be accessed on my office Web site by the public.

I expect, however, that this hearing will generate many additional questions from members. Given the complexity and importance of the issue, the administration must continue to be responsive to this committee and to the entire Congress.

The committee is cognizant of how valuable a closer relationship with India could be for the United States. I believe we will find little argument in Congress with the general premise that the national security and economic future of the United States would be enhanced by a strong and enduring partnership with India. Our nations share common democratic values, and the potential of our economic engagement is limitless. The progress made by India in the last decade is one of the world's major success stories. With a well-educated middle class that is larger than the entire United States population, India can be an anchor of stability in Asia and an engine of global economic growth.

Despite this success, the Indian Government recognizes that much of its growing population still lives in poverty; and to overcome these conditions, it will need more trade, more scientific and technical cooperation, and, most of all, more energy.

India's energy needs are expected to double by 2025. The United States has an interest in expanding energy cooperation with India to develop new technologies, cushion supply disruptions, cut greenhouse gas emissions, and prepare for declining global fossil-fuel reserves.

The United States' own energy problems will be exacerbated if we do not forge energy partnerships with India, with China and other nations experiencing rampant economic growth. That is why I've introduced Senate bill 2435, the Energy, Diplomacy, and Security Act, which would encourage international energy dialogues and advance a broad range of energy diplomacy goals.

But in pursing a nuclear relationship with India, we must deal with some fundamental facts. India has not signed the Nuclear Non-Proliferation Treaty. It has built and tested nuclear weapons, and it has declared its intention to continue its nuclear weapons programs and the production of fissile material. Although the U.S.-India Civilian Nuclear Agreement would move India into a closer relationship with the International Atomic Energy Agency, and would put more Indian reactors under safeguards, it would not prevent India from expanding its nuclear arsenal. If Congress approves this agreement, we'll be establishing a new course after decades of declining any cooperation with India's nuclear program.

It was apparent, from our earlier briefing, that the Bush administration considered the implications of this agreement on our international nonproliferation posture. After weighing many factors, the President and his team came down on the side of concluding the agreement with the Indian Government. They judged that the deal could be implemented without undercutting our nonproliferation advocacy and that its benefits included stronger Indian cooperation with international nonproliferation efforts.

Now Congress must undertake its own exhaustive deliberations, and we must reach our own conclusions. No one should suggest that the answers to our questions are either easy or obvious. What is required is a thorough bipartisan review of this agreement in the

context of nonproliferation goals, global energy requirements, environmental concerns, and our geostrategic relationship with India.

We especially thank Secretary Rice for joining us today after a long and successful trip, and for this opportunity to engage with her on this very important agreement.

And, indeed, Secretary Rice, we are honored that you are here. I'll recognize my distinguished colleague Senator Biden for his opening statement, at the time that he comes to the hearing this morning. But, for the moment, we would like to proceed with your testimony, and we ask that it be as comprehensive as you wish. Do not worry about time limits. We are here to hear you, and then to have an opportunity to raise questions with you.

STATEMENT OF HON. CONDOLEEZZA RICE, SECRETARY OF STATE, DEPARTMENT OF STATE

Secretary RICE. Well, thank you very much, Senator Lugar.

Mr. Chairman, members of the committee, thank you very much for this opportunity to come and discuss with you this, indeed, pathbreaking U.S.-India Civil Nuclear Cooperation Agreement. And it obviously deserves the support of the U.S. Senate, but we also understand that it deserves the thorough review of the Senate before giving that support. And so, that is why I'm here. And I want to note that we are prepared to continue our discussions and our briefings to the point that you feel that you have the information that you need to make this determination.

Let me note that I have longer, more—a fuller testimony that I would like to have entered into the record.

The CHAIRMAN. It will be made part of the record in full.

Secretary RICE. Thank you very much.

India's society is open and free. It is transparent and stable. It is multiethnic. It is multi-—a multireligious democracy that is characterized by individual freedom and the rule of law. It is a country with which we share common values.

India will soon be the world's most populous nation, and America's exports to India have doubled in only the past 4 years. And, of course, India is a rising global power that we believe can be a pillar of stability in a rapidly changing Asia. In other words, in short, India is a natural partner for the United States.

But, for too long during the past half century, during the cold war, in particular, because of both domestic policies and foreign policies, India and the United States were estranged. And one element of this estrangement was India's complete disregard—or India's complete isolation from the policies that the United States was concerned about concerning proliferation of weapons of mass destruction.

Now, as a result of India's decision to have a nuclear program, to test nuclear weapons, to build a nuclear program, as did Pakistan, India's adversary in that region, we adopted nonproliferation policies to try and constrain and change Indian behavior. But I think that it is entirely clear now that those past nonproliferation policies did not achieve their goals. In fact, they had no effect on India's development of nuclear weapons. They didn't prevent India and Pakistan from testing nuclear weapons in 1998. They contributed little to lessening regional tensions, which brought India and

Pakistan repeatedly to the brink of war. And all of this simply resulted in a more isolated India, especially isolated from the standards and practices of the nuclear nonproliferation establishment that have been development and maturing over the last decades?

Now let us consider the future that we could have instead. The initiative that we are putting before you and asking for legislation to amend the Atomic Energy Act of 1954 will advance international security, enhance energy security, further environmental protection, and increase business opportunities for both our countries. All of these benefits must be viewed in this larger context, of course, of how the initiative itself elevates the U.S.-India relationship to the new strategic level that we desire.

The initiative, first and foremost, will deepen that strategic partnership. The United States and India are laying the foundation for cooperation on major issues in the region and beyond, building on and building up a broad relationship between our peoples and governments.

I was just with President Bush in India, and I can tell you that the discussion was broad and multifaceted. It was a discussion not just between governments, but between peoples, discussions about how to improve agriculture in India, much as we helped to spur the Green Revolution in India of the '60s. We talked about the ability for India to access the new technologies to increase its agricultural production. There were discussions about Indian education and the desire for all of India's people to be able to access the new knowledge-based economy that is growing so rapidly in India. And, of course, there were discussions between CEOs of Indian companies and American companies, showing that this is a broad relationship that is not just government-to-government relationship, but one that is fundamentally affecting our societies.

Now, in order to fully realize the potential of this vision for India, we do have to deal with the longstanding impediments associated with civil nuclear cooperation, and we need to resolve them once and for all. We believe that this initiative will unlock the progress of our expanding relationship in other areas.

The initiative will clearly enhance energy security. India is a nation of over a billion people, with an economy growing at approximately 8 percent each year. It has a massive and rapidly growing appetite for energy. It is now the world's sixth largest consumer of energy. Diversifying energy's—India's energy sector will help it to meet its ever increasing needs and, more importantly, ease its reliance on hydrocarbons and unstable sources, like Iran. This is good for the United States.

Secondly, the initiative will benefit the environment. Nuclear energy is, after all, clean energy. And providing India with an environmentally friendly energy source like nuclear energy is an important goal. India's carbon emissions increased 61 percent between 1990 and 2001. That number is surpassed only by China.

This initiative will create opportunities for American jobs. Nuclear cooperation will provide a new market for American nuclear firms, as well as assist India's economic development. The initiative may add as many as three to five thousand new direct jobs in the United States, and about 10,000 to 15,000 indirect jobs in the United States, as the United States is able to engage in nuclear

commerce and trade with India. By helping India's economy to grow, we would, thus, be helping our own.

Finally, this initiative does strengthen the international nuclear nonproliferation regime. I know that there has been a lot of concern about the Non-Proliferation Treaty and India's refusal to join, and, indeed, the view that India should not join as a nuclear-weapons state, a view that we continue to hold.

I want to say to the chairman and to the committee that the United States values greatly the Non-Proliferation Treaty. It is one of the cornerstones of our nonproliferation policy. But, of course, there is a broader nonproliferation regime, as well. And we believe that the continued isolation of our strategic partner from that regime is the wrong policy choice. The initiative is, thus, a strong net gain for nonproliferation, in general.

I might just note that the custodian of the nonproliferation regime, Mohammed ElBaradei, has been, from the very beginning, a strong supporter of this initiative, and he remains so. I should note, also, that Great Britain and France are strong supporters, and Russia supports it, as well. Both Prime Minister Blair and President Chirac have issued statements in that regard.

Now, I want to take just a moment to take, head-on, if you will, several criticisms that have been made of the initiative. And let me associate myself with what the chairman said, it is a pathbreaking agreement, and, of course, one always has to balance the various factors in deciding whether or not it is worth pursuing. We believe that the criticisms can be addressed. And I will address them here.

First, India would never accept a unilateral freeze or cap on its nuclear arsenal. We raised this with the Indians, but the Indians said that its plans and policies must take into account regional realities. No one can credibly assert that India would accept what would amount to an arms control agreement that did not include other key countries, like China and Pakistan.

Second, the initiative with India does not seek to renegotiate or amend the NPT. India is not, and is not going to become, a member of the NPT as a nuclear-weapons state. We are simply seeking to address an untenable situation. India has never been party to the NPT, and this agreement does not bring—but this agreement does bring India into the nonproliferation framework, and thus strengthen the regime.

Third, civil nuclear cooperation with India will not lead to an arms race in South Asia. Nothing we or any other potential international suppliers provide to India under this initiative will enhance its military capacity or add to its military stockpile. Moreover, the nuclear balance in the region is a function of political and military—the political and military situation in the region. We are far more likely to be able to influence those regional dynamics from a position of strong relations with India, and, indeed, with Pakistan.

Fourth, this initiative does not complicate our policies toward countries like North Korea or Iran. It is simply not credible to compare India to North Korea or to Iran. While Iran and North Korea are violating their IAEA obligations, India is making new obligations by bringing it—the IAEA into the Indian program and seeking peaceful international cooperation. Iran, and especially North

Korea, are, of course, closed, nondemocratic societies. India is a democracy. In fact, India is increasingly doing its part to support the international community's efforts to curb the dangerous nuclear ambitions of Iran.

In sum, the U.S.-India Civil Nuclear Cooperation Initiative is a strategic achievement. It's good for America. It's good for India. And it's good for the international community.

I know that there is a history that we are trying to overcome. But the time comes when you must deal with the realities and, indeed, overcome that history. President Bush and I look forward to Congress as a full partner in this initiative. Your support for this legislation is crucial, and we ask you to lend it.

Together, we can seize this tremendous opportunity to solidify a key partnership that will advance American interests, the ideals of peace and prosperity and liberty, for which we stand.

Thank you, Mr. Chairman. I very much look forward to answering the questions of the distinguished members of the committee.

Thank you.

[The prepared statement of Secretary Rice follows:]

PREPARED STATEMENT OF SECRETARY OF STATE CONDOLEEZZA RICE

Mr. Chairman and Members of the committee, thank you for the opportunity to testify today. I am pleased to discuss with you why President Bush and I think that the U.S.-India Civil Nuclear Cooperation Initiative deserves the support of the United States Senate.

On March 2 in New Delhi, the United States and India reached a historic understanding on civil nuclear cooperation. This strategic achievement will advance energy security, further environmental protection, foster economic and technological development in both of our countries, bolster international security, and strengthen the global nonproliferation regime. All of these benefits, however, must be viewed in a still larger, still greater context: What this initiative does to elevate the U.S.-India relationship to a new, strategic height.

Recall for a moment where we were before this initiative. For too long during the past half century, differences over domestic policies and international objectives kept India and the United States estranged. We had a bedeviled relationship, a structural ambivalence between the world's leading democracy and the world's largest democracy. For years, relations between our two countries were constrained, thereby limiting America's ability to shape a productive future for South and Central Asia, which will be one of the most dynamic regions in the 21st century.

Our past nonproliferation policies toward India had not achieved their purposes. They had no effect on India's development of nuclear weapons. Nor did they prevent India and Pakistan from testing nuclear weapons in 1998. They had contributed little to lessening regional tensions, which brought India and Pakistan repeatedly to the brink of war.

These policies also left us with a more dangerous energy future. They effectively forced India to rely on oil and gas from Iran and the Persian Gulf, or on destabilizing competition over waterways to produce hydroelectric power.

All of this resulted in a more isolated India—isolated especially from the standards of the nuclear nonproliferation establishment, prevented from reaping the benefits of a long history of global cooperation. This left India fostering insular and resentful attitudes, protecting a sheltered nuclear industry.

When President Bush came into office, he judged that our relations with India would be central to the future success of U.S. foreign policy in South Asia and around the world. He resolved to transform our relationship with India, and in the past five years, that is exactly what we have done. The world's oldest democracy is now building a global partnership with the world's largest democracy. As the President said in New Delhi: "India in the 21st century is a natural partner of the United States because we are partners in the cause of human liberty."

This partnership is founded on common interests and shared ideals:

- Democracy: India's society is open and free, transparent and stable. It is a vibrant, multi-ethnic, multi-religious democracy characterized by individual free-

dom, the rule of law, and a constitutional government that owes its power to free and fair elections. It is a positive model in the international community.

- Security: India is a rising global power and a pillar of stability in a rapidly changing Asia. India will continue to possess sophisticated military forces that, just like our own, remain strongly committed to the principle of civilian control, and will in the future help to promote peace in Asia and across the world.
- Prosperity: India is committed to economic liberty and strong growth. It has an immense, skilled, and youthful workforce. It will soon be the world's most populous nation, with the world's largest and fastest growing middle class. By 2025, India will most likely rank among the world's five largest economies. American exports to India have doubled in only the last four years.

Developing civil nuclear cooperation with India represents the promise of this new partnership—a partnership that will become one of the most important we have with any country in the 21st century. Recall again where we were with India before we launched this initiative: a conflicted relationship, the wrong energy incentives, and a failed nonproliferation policy. Today, I want to discuss what we can have instead: a strategic partnership, enhanced energy security, greater environmental protections, increased business opportunities, and of course, a more secure future.

Taken together, the before and after comparison is compelling: This initiative is good for America. It is good for India. And it is good for the international community. So let us move forward with it.

THE U.S.-INDIA CIVIL NUCLEAR COOPERATION INITIATIVE

Before I turn to the benefits of our Civil Nuclear Cooperation Initiative, let me first run through the specifics of the initiative itself. The basic agreement is this: India has pledged, for the first time in 30 years, to submit its entire civil nuclear program to international inspection and to take on significant new nonproliferation commitments in exchange for full civil nuclear cooperation with the international community. With this initiative, the world is expecting India to be a full partner in nonproliferation, and India is expecting the world to help it meet its growing energy needs.

Specifically, India has agreed to place all future civil reactors—both breeder and thermal—under permanent International Atomic Energy Agency (IAEA) safeguards and to continue its unilateral moratorium on nuclear testing. India will also place a majority (14 out of 22) of its existing and planned power reactors under safeguards by 2014. Under this initiative, 65 percent of India's thermal reactors will be brought under safeguards, a figure that the Indian government has said could rise as high as 90 percent as India procures more civil reactors in the next 15 years. To put this in perspective, imagine the alternative: Without this initiative, 81 percent of India's current power reactors—and its future power and breeder reactors—would continue to remain outside of IAEA safeguards. The Indian nuclear power program would remain opaque, a nuclear black box.

Once this initiative is implemented, potential American and international suppliers will be able to invest in India's safeguarded civil facilities solely for energy production and other peaceful purposes. The safeguards required by this initiative are designed to help detect, and thereby help prevent, the diversion to military use of any materials, technologies, or equipment provided to India's civil nuclear facilities. Once a reactor is under IAEA oversight, safeguards will be in place permanently and without any conditions.

But that is not all. The Indian government will negotiate and sign an Additional Protocol with the IAEA, and it will work with the United States to conclude a multilateral Fissile Material Cutoff Treaty. India has also agreed to create a robust national export control system that includes harmonization with and adherence to the Missile Technology Control Regime and Nuclear Suppliers Group guidelines. Finally, India will continue its unilateral moratorium on testing and refrain from transferring enrichment and reprocessing technologies to states that do not possess them. Just last June, as part of our ongoing discussions on civil nuclear cooperation, India's parliament passed a landmark WMD export control law that significantly upgraded and improved India's ability to counter the proliferation of materials related to weapons of mass destruction. This law makes such proliferation a crime in India, just as it is in the United States.

For this initiative to go forward now, both parties must meet their obligations. For our part, President Bush is committed to work with the U.S. Congress to amend relevant domestic laws—the Atomic Energy Act of 1954—and to seek agreement within the Nuclear Suppliers Group to accommodate this cooperation. The United States will also negotiate an agreement on peaceful nuclear cooperation with India,

which we will submit to the Congress, and seek to assure the reliable supply of nuclear fuel to India through multiple avenues and instruments.

India has commitments as well, and it is already acting on them. In fact, the Chairman of India's atomic energy commission is traveling to Vienna this week to begin negotiations with the IAEA on both a safeguards agreement and an Additional Protocol. India has delivered to us a list of specific reactors to be placed under safeguards and a general timeline for doing so. Under this plan, all 14 reactors will be offered for safeguards by 2014. In addition, India will place associated upstream and downstream facilities under safeguards and has declared nine research facilities as civilian. India has also provided initial verbal comments on our draft agreement for peaceful nuclear cooperation.

In the coming months, we hope that India will also take a number of additional measures to further strengthen its commitment to global nonproliferation. In addition to adhering to the Missile Technology Control Regime and Nuclear Suppliers Group Guidelines, as India committed in the July 18 Joint Statement, these additional measures include, for example, announcing its intention to participate in the Proliferation Security Initiative and harmonizing its export control lists with the Wassenaar Arrangement and the Australia Group. We are in constant discussion with our Indian counterparts and will continue to press these and other nonproliferation measures through the course of our strategic partnership.

Mr. Chairman, as you know, implementing this initiative will require a carefully orchestrated series of events involving the coordination of not only the two governments, including the U.S. Congress, but also the IAEA and the Nuclear Suppliers Group. It is our vision and our hope that progress can be achieved on several fronts simultaneously.

Once implemented, this initiative with India will benefit the United States in five important and linked ways.

1. The Initiative Will Deepen Our Strategic Partnership

This initiative is a key element of our growing strategic partnership with India: we believe it will help make India one of our most valuable global partners and help make possible significant achievements in many other areas of cooperation.

More than two million Indians, many of them now U.S. citizens, live in the United States. More Indians study in our universities than students from any other foreign country. India is the largest source of skilled temporary workers coming to the United States and the second largest source of legal migration. The United States and India have committed to doubling bilateral trade within three years.

The explosive growth of private ties between our peoples is magnified by new initiatives between our governments. Last summer's historic summit between the President Bush and Prime Minister Singh embodied the strategic achievements of the first four years of our nations' new relationship. The President's recent visit to India has shown how much more can be accomplished. Both leaders committed themselves to fostering a second Green Revolution in agriculture, to advancing space exploration, and to establishing a new science and technology partnership. They pledged to increase democracy promotion efforts, to invest in energy security, and to double bilateral trade within three years. And they decided to expand defense cooperation through a new maritime security initiative.

In other words, the United States and India are laying the foundation for cooperation on major issues in the region and beyond, building on and building up a broad relationship between our peoples and our governments. We will not fully realize this vision, however, unless the impediments associated with civil nuclear cooperation, which have complicated all efforts to improve bilateral relations during the last thirty years, are resolved once and for all. The structural ambivalence must be resolved. This initiative is the key that will unlock the progress of our expanding relationship.

And imagine, Mr. Chairman, what would happen if this initiative were defeated, or changed in a way that fundamentally alters its substance. All the hostility and suspicion of the past would be redoubled. And think of Prime Minister Singh, who has braved the shouted dissent of his anti-American critics. We would hand the enemies of this new relationship a great victory—We would slide backward when we should be striding forward.

2. The Initiative Will Enhance Energy Security

The global search for new and stable sources of energy is now a defining issue in all aspects of international life. Civil nuclear cooperation with India will help it meet its rising energy needs without increasing its reliance on unstable foreign sources of oil and gas, such as nearby Iran. Diversifying India's energy sector will help to alleviate the competition among India, the United States, and other rapidly

expanding economies for scarce carbon-based energy resources, thereby lessening pressure on global energy prices.

India—a nation of over a billion people, with an economy growing at approximately 8 percent each year—has a massive and rapidly growing appetite for energy. Huge population growth, expanding industrial production, economic development, urbanization, and increased motor vehicle ownership are all driving this insatiable energy demand. Between 1980 and 2001, demand increased by 208 percent. By contrast, China, often thought of as the next big energy consumer, saw a 130 percent increase over the same period. In 2003, India was the sixth largest consumer of energy in the world behind only the United States, China, Russia, Japan, and Germany.

To meet its mounting power demands, the Indian government plans to double its capacity to produce electricity within the next eight years. With Congressional endorsement of the U.S.-India Civil Nuclear Cooperation Initiative, a large proportion of that growth would be in clean nuclear technology.

Currently, over 50 percent of India's total energy, and 70 percent of India's electric power generation, is derived from coal. Of the remaining 50 percent, nearly 35 percent is derived from oil; seven percent from natural gas; five percent from hydroelectric power; and about one percent from renewable sources like solar and wind. Only two percent of India's total power generation comes from nuclear energy. To put this in perspective, even the United States, which has historically limited nuclear energy use, derives over 20 percent of its power from nuclear energy. Japan derives 30 percent, and France roughly 78 percent.

India's operating civil nuclear power plants currently have approximately 3,310 megawatts of installed capacity. Given the opportunity, India plans to invest quickly in additional civil nuclear reactors so that, by 2020, its capacity to produce electricity from clean nuclear technology would reach 20,000 megawatts—a six-fold increase. Under this plan and further long-term objectives, approximately 20 percent of India's total energy production would eventually be met by nuclear technology, thus significantly decreasing the growth in its reliance on fossil fuels.

Since the historic March 2 announcement, senior officials in India's atomic energy establishment have indicated their desire to exceed the 20,000 megawatts target through the accelerated import of high-unit capacity foreign reactors to further reduce their dependence on dirty coal and fossil fuels. This decrease will be welcome, as India's demand for oil and natural gas is immense and will only increase as its economy grows and industrializes. In 2005, India's net imports of oil totaled approximately 1.7 million barrels per day. Even with conservative estimates, these imports are predicted to grow to 2 million barrels per day within only the next four years. Much of that oil is imported from unstable sources. As part of the newly launched, U.S.-India Energy Dialogue, the United States has committed to help India secure other stable sources of energy. The Civil Nuclear Cooperation Initiative is one significant element of that commitment.

3. The Initiative Will Benefit The Environment

Civil nuclear cooperation, along with the deployment of cleaner fossil fuel technologies, will not only help India meet its energy needs, but it will do so in an environmentally-friendly way. India's heavy dependence on coal and oil for electricity generation has another negative side effect: high levels of carbon emissions, which have made India a major contributor to greenhouse gas emissions and global climate change. Between 1990 and 2001, India's carbon emissions increased by 61 percent, a rate of growth surpassed only by China. Extrapolating from these trends, scientists expect that this will only get worse. According to the Department of Energy, between 2001 and 2025, India's carbon emissions will grow by 3 percent annually, twice the predicted emissions growth in the United States. Air pollution and growth in greenhouse gases is a visible and significant fact of life in India's major cities.

India's dependence on its domestically-produced coal raises many other environmental concerns. Indian coal is extremely energy inefficient. It produces about twice as much ash and particulate matter as American coal. And it emits far more nitrogen oxide (an element in photochemical smog) and carbon monoxide (a poisonous gas) than American coal does. Power plants are also the main source of Indian emissions of carbon dioxide, the most important greenhouse gas. In addition, mercury emissions from India's inefficient coal-fired plants can enter the food chain.

These high emissions, along with emissions from other sources, have made all four of India's largest cities—New Delhi, Mumbai, Chennai and Kolkata—among the most polluted in the world. Emissions from power plants are thought to be the prime contributor to the Atmospheric Brown Cloud now hovering over the Bay of Bengal and polluting many coastal areas. if this cloud grows and moves overland, as is currently expected, the resulting effects on public health would be disastrous.

The health risks associated with India's pollution are thus negatively affecting not only the Indian population, but the population of the entire region.

While the United States is working with India to integrate cleaner, more efficient, coal-burning technologies into its power plants, a rapid expansion of India's coal-fired generating capacity, just to meet basic energy needs, would make that work much more challenging. Slowing this expansion will help us achieve our aggressive objectives for slowing the growth in Indian pollution.

To the extent that India expands its use of cleaner energy technology, the result will be reduced air pollution locally, regionally, and globally. Nuclear plants do not emit greenhouse gases. While some opponents of nuclear energy point to the problems associated with disposing of spent nuclear waste, the technology is readily available to store nuclear waste safely for thousands of years and prevent it from contaminating the surrounding environment. India's commitment to a closed cycle also permits it to manage its nuclear waste far more effectively while simultaneously utilizing the energy potential of its feedstock far more effectively.

Of course, the Civil Nuclear Cooperation Initiative alone will not fully address Indian emissions of air pollution and greenhouse gases. It does, however, take a sizeable step in the right direction. Civil nuclear cooperation will advance the goals of the Asia-Pacific Partnership on Clean Development and Climate and is also an important piece of our Energy Dialogue, which aims to address India's energy needs from every perspective. As a critical step in reducing the growth of India's heavy dependence on coal and its greenhouse gas emissions, our civil nuclear initiative would be one of the greenest parts of India's new Green Revolution.

4. The Initiative Will Create Opportunities For U.S. Business

This is a time of renaissance in the Indian-American relationship, punctuated by our tremendous growth in trade. In the past year alone, Boeing announced a $13 billion sale to India, and Cisco, Intel, and Microsoft all made major investments in India's high-tech sector. In July, when Prime Minister Singh visited Washington, he and President Bush announced the most ambitious strategic leap ever undertaken by our two governments, illustrated by joint ventures in 18 different fields, including the Civil Nuclear Cooperation Initiative.

At its core, our initiative with India is not simply a government-to-government effort. It was crafted with the private sector firmly in mind. Because it will fully open the door to civil nuclear trade and cooperation, this initiative is good for American business.

India currently has 15 operating thermal power reactors, with seven under construction, but it intends to increase this number significantly. Meeting this ramp-up in demand for civil nuclear technology, fuel, and support services holds the promise of opening new business opportunities for American firms, which translates into new jobs, new incomes, and new markets for the United States. Indian officials indicate they plan to import at least eight new 1,000 megawatt power reactors by 2012, as well as additional reactors in the years ahead. Preliminary private studies suggest that if American vendors win just two of these reactor contracts, American industry estimates it may add 3,000–5,000 new direct jobs and about 10,000–15,000 indirect jobs in the United States.

At the same time, participation in India's market will help make the American nuclear industry globally competitive, thereby benefiting our own domestic nuclear power sector. This legislation, and the associated bilateral peaceful nuclear cooperation agreement now being negotiated, will permit U.S. companies to enter the lucrative and growing Indian market—something they are currently prohibited from doing.

An expanded Indian civil nuclear power industry will also help to take the pressure off the long-term global demand for energy. Increasing demand for natural resources causes our own energy prices to rise as well. To the extent that we can reduce the demand for fossil fuels, it will help the American consumer.

Furthermore, this initiative will also significantly help India's economic development. Human development and economic growth depend on the reliable, affordable, and environmentally-friendly supply of energy to allow for the full production of goods and services. India is struggling to keep up with its energy demands, with many urban areas currently subject to unscheduled black-outs and routine daily interruptions of power. In 2005, there was an average electricity shortage of 10 percent and a peak excessive power demand of 15 percent. These shortages are expected to become more severe, thus preventing India's growing business and industry from functioning effectively. Such unreliability is detrimental to India's economic growth and its prospects for greater foreign investment. The Civil Nuclear Cooperation Initiative would provide India access to a privatized and more efficient nuclear energy market, enabling its economy to grow to its full potential. Needless to say,

as India grows, it provides an ever bigger market for American exports. So by helping India's economy, we are in turn helping our own.

5. The Initiative Will Enhance The International Nuclear Nonproliferation Regime

Mr. Chairman, let me address the issue that has received the most attention since this initiative was announced: nuclear nonproliferation. I will start by saying unequivocally that this initiative is a net gain for global nonproliferation efforts. We better secure our future by bringing India into the international nonproliferation system, not by allowing India to remain isolated for the next thirty years the way it has been for the last thirty. We are clearly better off having India most of the way in rather than all the way out.

There are some who doubt this, and I would now like to discuss some of the questions that have been raised about this initiative.

First, I must address the belief that somehow this initiative could have been used to force India to accept a unilateral freeze or cap on its nuclear arsenal. The U.S. has achieved an important strategic objective by obtaining India's commitment to work toward a multilateral Fissile Material Cut-off Treaty. But India's plans and politics must take into account regional realities. No one can credibly assert that India would accept an arms control agreement that did not include the other key countries, namely China and Pakistan. Therefore trying to use American leverage to get India to make this unilateral move is an idea that is certain to fail. It is a poison pill to kill any possibility for change.

Second, some have expressed concern that civil nuclear cooperation with India will weaken the NPT, or undermine global nonproliferation efforts. Dr. Mohamed ElBaradei, the Director General of the IAEA—the agency responsible for applying safeguards - does not share this concern. Just the opposite. Dr. ElBaradei publicly praised the initiative the day it was announced, stating that it will "bring India closer as an important partner in the nonproliferation regime. . . . It would be a milestone, timely for ongoing efforts to consolidate the nonproliferation regime, combat nuclear terrorism and strengthen nuclear safety." Four of the five NPT-defined nuclear weapon states have also endorsed the initiative. In fact, British Prime Minister Tony Blair and French President Jacques Chirac even released public statements in which both refer to the benefits that this initiative has for international nonproliferation efforts.

The global nonproliferation regime is a remarkable diplomatic achievement. Since its inception, the NPT and related international mechanisms have helped keep the number of nuclear-armed states to a minimum while spreading the benefits of civil nuclear technology to all who joined the treaty. We want India to participate more fully in sharing this global responsibility. This initiative aligns India more closely with international nuclear nonproliferation standards.

Our initiative with India does not seek to renegotiate or amend the NPT. India is not, and is not going to become, a member of the NPT as a nuclear weapon state. Nothing we are proposing would violate our NPT obligations that we not "in any way assist" India's nuclear weapons program. We are seeking to address an untenable situation: India has never been a party to the NPT. It did not cheat. It simply developed nuclear weapons outside this context, a long time ago, finishing a program that was well underway before the NPT had been signed. India then found itself frozen for a generation in this anomalous state. It now faces substantial energy needs ahead that can be partly met through nuclear energy.

Despite India's strong nuclear nonproliferation export record, its continued existence outside the global nonproliferation regime undermines the regime's interests and U.S. security goals over the long term. The real choice is this: do we want a state that intends to expand significantly its civil nuclear power production in the years ahead to remain outside the international nonproliferation regime? Or do we instead want it to adopt global nonproliferation practices while increasing our insight into its civil nuclear program? President Bush has made his choice, and it is the correct one.

Third, others have asserted that this initiative permits India to expand its nuclear arsenal significantly. This is just not the case. The initiative does not cap Indian nuclear weapons production, but nothing under this initiative will directly enhance its military capability or add to its military stockpile. India could already build additional weapons within the limits of its capabilities if it so desired, with or without this deal. But the Indian government has repeatedly confirmed in public that it intends to expand its civil nuclear energy capability.

Fourth, we believe that civil nuclear cooperation with India will not lead to an arms race in South Asia. In our view, the prospects for such an arms race will be determined by bilateral relations between India and Pakistan, not the Civil Nuclear Cooperation Initiative. It should be noted that these relations have been consistently

improving for the past three years. The ongoing Composite Dialogue between India and Pakistan has significantly reduced tensions and built confidence on both sides. Just last week, Prime Minister Singh spoke of the desirability of a treaty of peace, security, and friendship between India and Pakistan, which Pakistan immediately welcomed.

To further improve relations and ensure strategic restraint on both sides, the United States is prepared to intensify significantly our diplomatic effort with both India and Pakistan. Continuing to improve our relations with both India and Pakistan will allow us to promote peace and counsel restraint in their military procurement plans.

Fifth, some have argued that the initiative with India will undermine our efforts to curb Iran and North Korea's nuclear ambitions, because it creates an alleged "double standard." This is simply not credible, because comparing India to the North Korean or the Iranian regime is not credible. India is a democracy, transparent and accountable to its people, which works within the international system to promote peace and stability and has a responsible nuclear nonproliferation record. The regime in Iran is a state sponsor of terrorism, with a long record of cheating on its nuclear obligations to the international community, and it is violating its own nuclear obligations at present. North Korea is the least transparent government in the world, which threatens its neighbors and proliferates dangerous weapons. While Iran and North Korea are violating their IAEA obligations, India is making new ones and seeking peaceful international cooperation. So we do indeed treat India differently from the way we, and the international community, treat Iran and North Korea.

France, the United Kingdom, and Russia support our initiative with India, and we are all working closely together to curb the dangerous nuclear ambitions of the Iranian regime. India is increasingly doing its part to support the international community's efforts. Recall that India not once, but twice, stood with the United States and other nations against illegal proliferation by voting in the IAEA to find Iran not in compliance with its obligations and, later, to report Iran's nuclear violations to the UN Security Council. Prime Minister Singh faced down his anti-American critics at home to take these actions.

It's important to keep in mind that this initiative was not easy for Prime Minister Singh, though he has won support for it across India's major parties. But it is worth thinking about why this was tough for him. It was not because of the concerns mentioned here. The opposition in India wants to keep more distance from America. It wants to keep India's industry sheltered and protected. Surely those are not our goals. Surely Congress will not want to inadvertently miss this opportunity to make this strategic leap forward.

SEIZING OUR OPPORTUNITY WITH INDIA

I want to thank you, Mr. Chairman, for introducing S. 2429, which represents President Bush's proposed legislation to facilitate authorization of civil nuclear cooperation with India. This legislation asks Congress to amend the 1954 Atomic Energy Act. This will let American firms provide nuclear goods and services to India's civil nuclear program, something that is prohibited by current law. In addition, we will ask the Nuclear Suppliers Group to make a special exception for India to allow for full civil nuclear cooperation.

Congressional action on this legislation is critical in our efforts to secure broader international support for this new relationship with India. Foreign governments are looking to Congress to determine whether the United States stands solidly behind a new relationship with India. Prompt Congressional action will ensure that there is a solid basis for reliable, long-term cooperation with India. It will also assure U.S. industry of a solid framework for civil nuclear trade with India, at no competitive disadvantage with other nations.

Mr. Chairman: During his speech in New Delhi last month, President Bush spoke of his desire to "strengthen the bonds of trust between our two great nations." As we forge this bond, President Bush and I look to the Congress as a full partner in this initiative. Your support is crucial for this legislation. And we ask that you offer it. Together, we can seize this tremendous opportunity to solidify a key partnership that will advance American interests, and the ideals of peace, prosperity, and liberty for which we stand.

Thank you, Mr. Chairman, distinguished members of the committee. I would now be eager to respond to your questions.

The CHAIRMAN. Thank you very much, Secretary Rice, for your statement and for your reaching out to meet objections that have been offered publicly and constructively.

I wanted to recognize, at this moment, the distinguished ranking member of our committee, Senator Biden, for his opening statement.

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

Senator BIDEN. Madam Secretary, I apologize. As I came down today on the train, unfortunately, someone was struck on the tracks. And so, we switched to an automobile and drove, and I apologize for being late for such an important hearing.

The President and you have built on, I think, the good work that our former President made, in making a major strategic decision to develop a close partnership with India. And I believe most Members of the United States Senate embrace that effort. But many of us have questions about the wisdom of creating an Indian exception to the existing law on nuclear exports.

I sympathize with what the President is trying to do. India has maintained its democracy for more than half a century in a land of great religious and political diversity. India has built a dynamic middle class in the last 15 years, and embraced a global economy. And India is a dominant regional power and a respected international voice, and it's working to improve relations with China, as well as Pakistan. And India soon will become, as you know better than I, the most populous country in the world.

I can think of no relationship that's more important to develop than the U.S.-Indian relationship. I think it's good for both of us. It's not a zero-sum game.

But India's nuclear weapons raise difficult questions. India refused to sign the Nuclear Non-Proliferation Treaty, and then built nuclear weapons. And the question we're going to ask you about, to state the obvious, is, What impact will India's nuclear deal have on the NPT regime?

The plutonium for India's first weapons came from a Canadian reactor, using heavy water from the United States, that India had promised to use only for peaceful purposes. The question is, Will the current deal lead to a diversion from civil to military uses? I would hope, and expect, that may not be the case, but I think we're obliged to plumb that.

There are allegations India has engaged in covert procurement of equipment for its nuclear weapons program. If so, then is India really prepared to crack down on proliferation? I'd like to talk about those reports.

Isolating India's nuclear program for over 30 years failed to make India give up its nuclear weapons, but I take some issue with your comment in your opening statement saying our nonproliferation policies had been no affect on India's development of nuclear weapons. I would argue they succeeded in limiting the size and sophistication of India's nuclear weapons program and nuclear power programs. And the question is, What impact will this deal have on India's nuclear weapons program?

I had the opportunity to spend some considerable time with India's Foreign Secretary, and I asked him that question directly. After all these years, it's probably time we admit, in my view, that India will keep its nuclear weapons, and to help India find a new relationship in the world in nuclear matters.

But the India nuclear deal was made by the administration, acting often in understandable haste, as I understand it, I'm not sure you yet had a deal when you got to India. And there are certain lines that can't be crossed. We must not assist India's nuclear weapons program, to state the obvious, not because India's an adversary, which it is not, but because nuclear nonproliferation is a vital U.S. interest, as well as a formal treaty obligation. And we must not undermine the world's support for a nuclear nonproliferation regime by saying that nuclear weapons are fine for our friends.

I would point out that Nick Burns came to see us. He made a very compelling case on each of these points. But I think we should be talking about them in public.

We must not encourage rogue states—and I know that's not your intention, and I stress that India is not a rogue state—by creating a sense that we only oppose proliferation until it succeeds, and then make our peace with the new nuclear power. Congress should not give up its power under existing law without knowing what the U.S.-India peaceful nuclear cooperation agreement and India's safeguards agreement with the IAEA will contain, which is something that I do want to talk a little bit about, as well.

I'd like to be clear: the India nuclear deal could go forward without changing the law. Peaceful nuclear cooperation agreement with India would simply require approval of a joint resolution, by a majority of each of the houses. But the administration seeks a special exemption from the law to allow the agreement to proceed, unless Congress enacts a resolution of disapproval, which would require a two-thirds vote in each house to override a presidential veto. I realize this is procedure, and many of the listeners will get lost in this. But the question I'm going to ask you is, Why does the President want to change the law? Does he doubt that he could get a majority to approve the agreement? And, if so, why?

I look forward to having an exchange with you, Madam Secretary, and, again, apologize to you for being late. I will read your statement as the questions are being asked. America needs to, and should, pursue close relations with India. It has been in the offing for decades. We should build that friendship on a firm foundation of mutual interest and trust and international support. But we should do it right.

And one of the things I should tell you now, in conclusion, Madam Secretary, that I said to the Indian Foreign Secretary—although this is not required in a sequence in the deal that has been made, to the degree that India moves forward on these side agreements that they have, while I'm not suggesting we mandate this, but ideally if they could work that out before we went to a final vote, it would enhance the sense of confidence, I think, here, that, in fact, the deal was as good as you say. But I will get into that, as well.

Again, I thank you, Mr. Chairman, for allowing me to, in a sense, go out of order here.

And I thank you, Madam Secretary, for being here. You've had long travels. And we ought to see if we can get you two cots on that plane—so you don't have to be on the floor.

[Laughter.]

Senator BIDEN. Thank you.

The CHAIRMAN. Well, thank you very much, Senator Biden.

We'll have a round of questioning, and we'll have a 10-minute time for each Senator. And I'll ask each of my colleagues to try to be careful in observing that time, because we might be joined by other Senators during the course of this questioning, and we want to make certain that all are heard and their questions are answered.

Let me just amplify, again, our admiration, as a committee, for your committed diplomacy. I think that the travels you have undertaken, on specific missions, maybe even involving changes in schedule as you proceeded, were tremendously important. The dialogue, certainly with the Iraqi leadership, is critically important. And, likewise—and I don't mean to demean any of your stops—but I noted your own willingness to go with Jack Straw into the hustings of Great Britain, an arduous procedure, one with which many of us, as campaigners, are acquainted, and you are, too. You handled those chores admirably. It was important.

Senator BIDEN. Mr. Chairman, a lot of people on my side are wondering whether she's getting in practice.

[Laughter.]

Senator BIDEN. I don't know what to—what the——

The CHAIRMAN. Well, let's——

Senator BIDEN. She'd be a formidable presidential candidate, I——

[Laughter.]

The CHAIRMAN. Let's not go there, this morning.

Senator BIDEN. Okay.

The CHAIRMAN. We'll continue with India and the relationship we're forging that is even stronger there.

[Laughter.]

The CHAIRMAN. Let me just say, at the outset, that we've had a moment of conversation about Senate bill 1949, the so-called Lugar-Obama Arms Control bill. We share, obviously, both in the Senate and the administration, some problems with regard to budget and money. But we're looking, really, at this point, toward the State Department's support for what is essentially an authorization of additional activity. And would you affirm that the Department supports those efforts and will continue to work with us in refining the legislation?

Secretary RICE. I do, Mr. Chairman. Thank you very much. And we do support——

The CHAIRMAN. I appreciate that.

Now, I've mentioned, also, in my opening statement, another piece of legislation, Senate bill 2545. This originates because of our mutual discussion of the problems of energy in this world, and suggests, among other things, that the State Department, as a major focus, will want to take a look at the diplomatic possibilities in the energy field dealing with India, with China, with Brazil, with a number of countries. As I mentioned to you in our conversation,

Under Secretary Zoellick, knowing my interest in this and the comments that I've made, had affirmed that this is an interest of his and of the Department. At the same time, you had not had a chance, during your travels, to undertake study of this specific legislation, but I would encourage you and the Under Secretary, and those that you might delegate, to lift this, as you have been doing in reorganizing the Department, maybe to a proper focus, as you can.

Secretary RICE. Absolutely. Thank you very much. We will do that, yes.

The CHAIRMAN. Now, let me just say, for the record, that I want to put two pieces in the record—one, a letter from our former colleague, Senator Bill Cohen of Maine, who has written to me, understanding we were going to have this important hearing today.

Essentially, Secretary Cohen mentions that he believes that this particular bill we're discussing today will enhance the nonproliferation regime in a major way. I ask that we'll put that letter into the record, because that's an important affirmation.

[The information previously referred to appears in the appendix to this hearing.]

The CHAIRMAN. Likewise, and this is not necessarily an affirmation, but I think seven salient questions have been raised by a memo given to me by the Center for Nonproliferation Studies in Monterey. This is a group with which you're well acquainted, and I am, too, as a member of their advisory committee, with Dr. Bill Potter and my former colleague Sam Nunn. They have raised, it seems to me, not in a benign fashion, but, nevertheless, in an objective fashion, seven considerations

I'm going to put those in the record and ask, at your disposal, to try to respond to those specific questions, which I think are emblematic of the nonproliferation community.

[The information previously referred to appears in the appendix to this hearing.]

The CHAIRMAN. For my own part, let me just say that I believe that the undertaking, as I said in the opening statement, of a new relationship with India is a cardinal point. That, all by itself, has to be considered. It has not been a good relationship, on some occasions, or at least only mildly satisfying, for reasons that we all understand. After 9/11 of 2001, Secretary Powell called some of the members that are here today to S-407 and said, "As a point of national policy, you, ladies and gentlemen, must lift all the sanctions that we have imposed, political and economic, with regard to India and Pakistan, both—and now." And some members said, "Forever?" And he said, "Forever. It is a new world."

Now, this was a tall order, for many, who had been watching the India nuclear tests, and those followed quickly by Pakistan. Some members around this table will recall meetings around the Cabinet table with President Clinton, as we all thought, together, "What can we say to Pakistan that might forestall that?" And even as we were talking, word came that it was too late. So, that occurred. And it led to a number of sanctions being imposed, which many of us voted for and supported. Now, suddenly all these were removed,

because we had, in fact, a new world and a new set of strategic relationships, vis-a-vis Afghanistan and our allies that we were working with.

Now, from that rather difficult start, much has happened. And I compliment you and the President for your initiatives. I suspect the dilemma for all of us will be to weigh this factor: How important is the relationship with India? How important is India? And, therefore, we're all in an educational experience, understanding how big India is, how extraordinary the growth is, what the promise may be, what our relationships may be. But this is a big experience for each one of us, trying to discover India and the importance. I think you understand that, and your advocacy hopefully will continue to help us.

Now, one way in which India is very important, leaving aside all of the commercial transactions often mentioned—and they are substantial—is in the field of energy. I suppose that's the second point that I tried to make in my opening statement. I'm not the only person in the Congress who has been involved in nonproliferation work, and deeply concerned about this. With my former colleague, Senator Nunn, we have explored the hinterlands of Belarus, Ukraine, Kazakhstan, quite apart from most of the stretches of Russia, even up into the mountains in Albania recently, and so forth. So, at least I'm a reasonable competitor for anybody who is interested in nonproliferation, finding it and trying to get rid of it.

This is why I have referenced Bill Potter's group, for example, a responsible group, trying to think through, Where are we with the NPT, with India and the assurances that we believe it has given?

Now, having said that, I've become equally enthusiastic about what we must be doing in the world with regard to energy resources. I believe this is the source, presently, of potential conflict as great as the nonproliferation danger. This may not seen by all. But I've advocated that, inadvertently, perhaps, Russia, by shutting off the gas to Ukraine, has indicated to the world that countries can be hobbled by turning off the gas—without nuclear weapons, without anybody coming across the lines with tanks or guns or so forth. Now, this is the new security strategic weapon, and it is powerful.

As I visited in Libya this summer, I saw, in the Corinthia Hotel, a hotel relatively filled with Chinese and Indians, and they all had one objective, to pin down the last acre in Libya. We may not be that avid, but they are. And throughout Africa, I saw this. This is not news to you. But the fact is that the search, for a dynamic economy like India, which is talking about doubling its energy needs, for a billion people or more in just a very short period of time, less than a generation—and that may understate it—means that there are going to have to be alternative supplies.

Now, one may say, well, there's surely easier ways of finding energy for India than getting into nuclear power. Well, I'm not certain I see them. It appears to me that, leaving aside the strategic problems of proliferation, the problems of energy are extraordinarily important here.

I would comment that, just nearby, while we've been discussing this, Russia and China have been talking about oil and gas lines from Russia to China. There has been further talk about lines from

Russia to Japan, even Russia to Korea, but all with the same characteristics of Russia to Ukraine, for example, or Russia to Germany.

We're going to have to think about these things. And I don't demean, for a moment, my friends in the nonproliferation community, who are busy still working through the fine points of that. But this is a world of a dynamic India, and dynamic energy needs for India, for us, in the United States, for Russia, for everybody. So, those two areas are important as I take a look at it.

You have to judge this, and you have, and the President's visited there—but the question is, Is there a sense of mutual trust that we are both on the path of nonproliferation? We trust, as a matter of fact, that even if India has to have, in their judgment, a nuclear deterrent, vis-a-vis Pakistan, China, Russia, whoever else in the world, that we all understand that the course of history is not going to be kind to us if we are involved in an arms race. And the Indians, in their offering of assurances to us, begin to offer assurances to the rest of the world.

I will cease fire at this point, having exhausted my 10 minutes, but I just simply wanted to take this opportunity to express what I think are important arguments, or, for that matter, affirmations. And I suspect you would agree with most of that. So, I will not ask for a simple yes or no, but if you have a short comment, I would like it.

Secretary RICE. Well, thank you very much, Senator Lugar. Let me just underscore a couple of things that you have mentioned.

First of all, we do have a growing strategic relationship with India, and I think it is one that is increasingly based on trust and mutual interest, and common values. It's a trifecta, if you will. And I think that that's an important foundation for the relationship to move forward.

We do have to do something about the energy problem. I can tell you that nothing has really taken me aback more, as Secretary of State, than the way that the politics of energy is—I will use the word "warping" diplomacy around the world. It has given extraordinary power to some states that are using that power in not very good ways for the international system, states that would otherwise have very little power.

It is sending some states that are growing very rapidly in an all-out search for energy, states like China, states like India, that is really sending them into parts of the world where they've not been seen before, and challenging, in—I think, for our diplomacy.

It is, of course, an energy supply that is still heavily dependent on hydrocarbons, which makes more difficult our desire to have growth, environmental protection, and reliable energy supply, all in a package.

We've tried, in our diplomacy, to be attentive to that. For instance, we have a new Asia-Pacific Partnership on Energy and Climate, of which India is a member. We are looking to technological solutions for the energy appetite of growing countries. And, of course, being able to cooperate with India on civil nuclear cooperation would help us to pursue that goal.

And, finally, I'll just note that we also are looking very hard for good partners in the nonproliferation work. I, myself, Senator,

come from the arms-control community. You know that. I know the people of the nonproliferation community very well. I consider myself part of the nonproliferation-concerned community. So, you have to recognize that the NPT is the cornerstone, but one part of a maturing nonproliferation framework in which we are also working to have rules of the game that the Nuclear Suppliers Group has on certain standards of behavior—India is agreeing to adhere to those unilaterally-- to the missile control technology regime, which India is agreeing to adhere to unilaterally, efforts to get states to give up enrichment and reprocessing for assured fuel supplies, something that we are working with the IAEA on, and—and I might just notice—note here, making certain that those who signed the NPT and then violate it and disregard it are really the ones who come under punishment from the international system. And there, I have to say, there's a very big difference between the behavior of Iran and North Korea, who callously signed the NPT and then have not been in compliance with it. India never signed the NPT, but we are asking India to adhere to many of the important elements of the guidelines that are making up the nonproliferation regime.

And so, I have—I think we have to think about the energy and nonproliferation as two halves of this same walnut. But I would be very much in agreement with you that, on the energy side, we have simply got to do something about the warping, now, of diplomatic effort by the all-out rush for energy supply.

The CHAIRMAN. Thank you very much.

Senator Biden?

Senator BIDEN. Madam Secretary, to those of us who have spent our careers, as at least the three of us have—we're the oldtimers here—not referring to you—on matters relating to nonproliferation and arms control, this is a big deal. No pun intended. This is a big deal. And I think if we cut through it all, it comes down to a simple bet we're making. It's a bet that India appreciates, as much as we do, that our two nations have the potential to be the anchors for stability and security in the world going into the 21st century. Not alone, but two of the anchors. And I tried to communicate to the Foreign Secretary how fundamental an impact India's reaction to this deal would be—how much is based upon our trusting them not to be seeking this deal for purpose of advancing their nuclear weapons capability.

I'd respectfully suggest, if this goes through and we are wrong about their intentions, that they will have mortgaged the 21st century, literally, in a way that few nations will be held accountable for having done. They will have squandered—I don't anticipate this, but they will have squandered what I think to be an opportunity to begin to build a new century. I literally think it's that fundamental. And it relates to trust, as implied, or stated, by my chairman.

We are faced with a dilemma all the time here, to state the obvious, but for the record, that sometimes administrations—and I've had the pleasure of serving with seven Presidents—administrations and Presidents bring agreements to us that we would have done differently, we think, that we would not have moved forward with in the same way. And we're faced with a dilemma. The dilemma is, although the deal we're presented with, and required under the

Constitution to ratify or reject, may not be one that we like, the downside of failing to ratify it, because of the circumstances created by the negotiation, sometimes is greater than any downside might come from the mistakes that the agreement may embody.

And so, I just want to state, at the outset here, that I am probably going to support this. I'm going to ask you some very specific questions, in this round and next, mainly for the record, but I want you to know that I believe and appreciate that this is much bigger than the sum of the questions I'm going to ask you. And it really does—and I hope our Indian friends are listening—it requires not a leap, but a jump of faith here. This is a step of faith that they, in fact, are going to adhere to many of the things they heretofore have said they would not sign onto, that they're voluntarily going to do it. And the bottom line is, at the end of the day, they are not going, 5 years or 10 years from now, to have increased their nuclear capacity and sophistication in a significant way that begins to unravel the prospects of peace and security in the 21st century.

So, let me ask a couple of questions, if I may.

I am concerned, because members of the Nuclear Suppliers Group have contacted me, I've met with some of them—and they're concerned. They are not opposed, but they are very concerned. The NPT obliges us not, in any way, to assist, encourage, or induce any non-nuclear-weapons states to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, yet there is a uranium shortage in India now. This agreement would open up the ability, for the first time, for the world's suppliers of uranium to be available for the civilian nuclear reactors India plans on building. But based on the information I've been given, it will ease India's uranium crunch—they have one now—and thereby enable India to take that uranium, rather than, the argument goes, having to choose between using the limited amounts they have for their civil nuclear reactors or for their weapons program.

W hat's your response to the international community in saying that this doesn't, at least indirectly, assist or provide the avenue for India to be able to further enhance its nuclear weapons capability?

Secretary RICE. Well, thank you very much, Senator Biden. And thank you also for the context in which you put this, because we do believe that this is a very big deal. And we have also said to the Indian Government that this is more about its relationship not just with us, but with the international system. And that's something to be valued and safeguarded. And in a great democracy like India, I'm sure there are going to be plenty of people watching to see how this is carried out.

On the question of the Indian nuclear weapons program, first of all, the Indian program, we believe, just in terms of what India's incentives or disincentives are to grow its nuclear weapons program, its strategic program, are more related to the conditions in the region, the political/military conditions in the region, than to any quantity of available nuclear material. And the program for India has been restrained over the number of years. I think most people would argue that it's a relatively restrained, kind of, minimum-deterrent program. Their words, not mine.

Secondly, the region is one in which the political situation has improved and, we hope, is going to continue to improve. There's no doubt that when, I'm sure, Colin Powell was briefing all of you about the near nuclear—near war experience in 2001, and then later in 2002, none of us would have foreseen where we are now with a comprehensive dialogue between Pakistan and India, talks of a peace treaty, even discussions about the future of Kashmir. And so, we believe that by strengthening our relationships with these countries, we can actually contribute to that environment. And that's the real guarantor of trying to stop an arms race.

But, third, I think it's the assessment that we have that India has some 50,000, give or take, tons of uranium available to it in its reserves, and it would need a very small percentage of that on the military nuclear side. And, in fact, we do not believe that the absence of uranium is really the constraint on the nuclear weapons program. On the other hand, on the civil side, the amount of fuel that one would need to run a civil program for years and years and years is far in excess of what India can mine indigenously. So, we think the incentives, or the crunch, if you will, is really on the civil side. And it, therefore, gives India incentives to safeguard future reactors. It gives India incentives to safeguard fuel supply, and to get that fuel supply under a nonproliferation—international nonproliferation regime.

Senator BIDEN. If I could interrupt you, because you've answered the question, I'd like to go to one last question, in the 2 minutes or so I have left.

Secretary Burns, for whom I have an inordinately high regard, told the U.S. Chamber of Commerce, that, quote, "India has decided to adhere to the Australia Group, the Wassenaar Agreement"—and let me make sure I quote this exactly—"The Australia Group established joint controls over CW and BW materials, equipment, and technology. The Wassenaar Agreement works to limit the sales of advanced conventional weapons. Adhering to these groups would be an important positive step. In the past, India has refused to bar chemical weapons exports unless the terms were listed in the Chemical Weapons Convention."

Now, here's my question. The Under Secretary has stated that. Has India officially announced that it will adhere to the Australia Group? Have you gotten a guarantee?

Secretary RICE. India has told us that it wishes to adhere to the Wassenaar Group, also to the MTCR guidelines, to the NSG guidelines. We are still discussing with India its potential participation in the Proliferation Security Initiative. And so, yes, they have told us that they wish to adhere.

Senator BIDEN. Well, my time is up, 35 seconds up. I would send a message, if anybody in India is listening, that to the degree to which that can be solidified and made as an assertion, in terms of Indian policy, it would enhance the prospects of smoother sailing for this agreement here in this body now.

But I thank the Secretary.

Secretary RICE. Thank you, Senator.

The CHAIRMAN. Thank you very much, Senator Biden.

Senator Chafee?

Senator CHAFEE. Thank you very much, Mr. Chairman, and good to join you. Madam Secretary.

In your opening statement, you said that—and throughout your comments, you mentioned, frequently, the reliance on Iranian energy. And you said they effectively force India to rely on oil and gas from Iran. What confidence do we have that if this amendment of the 1954 Atomic Energy Act occurs, that that reliance on Iranian energy won't go forward anyway, that a pipeline won't be built anyway?

Secretary RICE. Thank you, Senator.

Well, I can't be assured that it will not. But let me just note that India is, of course, not the only country with a oil and gas relationship with Iran. Some of our closest allies—Japan has an oil and gas relationship with Iran. The Europeans—Italy is Iran's largest trading partner. So, most countries have a different relationship with Iran than we do. But what we are saying to everyone—and I think it is now getting—gaining resonance—is that Iran is not really a reliable, in the long run, supplier, because of the behavior of Iran in—concerning the entire international community about what its intentions are toward a nuclear program. The unreliability of that Iranian oil and gas supply has got to be taken into account. The nature of Iranian policies have got to be taken into account.

And the one point that I would make is that I think you will see everybody taking a harder and harder look at their relationships and reliances on some of these states that from time to time talk about using oil and gas as a weapon when they are confronted with policies that they do not like. And so, while I can't tell you that if India has access to civil nuclear they are going to forgo other relationships, it does give them, in many ways, a better option for a more reliable energy supply than being dependent on states that from time to time brandish the oil and gas weapon when they don't like the behavior of other states.

Senator CHAFEE. Would you—since this—you had talked about the lack of reliability of Iranian energy. Was this our initiative or an Indian initiative?

Secretary RICE. I'm sorry, the——

Senator CHAFEE. This proposed amendments to the 1954 Atomic Energy Act.

Secretary RICE. This——

Senator CHAFEE. Because it seems as though it's our initiative. If they are concerned about the reliance and the sustainability of Iranian energy, that it would be their initiative. But that doesn't seem to be the case.

Secretary RICE. Well, the initiative to amend the law is simply because we need to change American law, so it comes from the American administration. But the civil nuclear——

Senator CHAFEE. Who approached whom on this?

Secretary RICE. On the civil nuclear cooperation?

Senator CHAFEE. Yes.

Secretary RICE. Oh. Well, this goes back to our discussions with India, going all back—almost back to the beginning of the administration, where they began to talk about their energy needs, about their desire to be able to engage in civil nuclear cooperation. At the time, we were not ready to discuss that, and we had next steps in

the strategic partnership that allowed us to talk about some other aspects of energy. But the Indians raised, some time ago, their desire to begin to diversify their energy, because right now they are very heavily dependent either on oil and gas or on coal, which, for the environment, of course, is a real problem.

Senator CHAFEE. My question has to do with in whose best interest is this? It seems as though we want to break the association between India and Iran and their oil, that the driving force behind——

Secretary RICE. Oh——

Senator CHAFEE [continuing]. These amendments to the 1954 Atomic Energy Act.

Secretary RICE. Senator, it's not the driving force. The driving force is the strategic partnership with India and having a full-scale partnership with India that can fully deal with technological cooperation, energy cooperation, economic cooperation, all of which, we believe, are hindered by the absence of our ability to do civil nuclear cooperation.

I only make the Iran point as one, among many, that reliable energy supply is a problem for countries like India that are growing at 8 percent, that need energy supply, and they're looking for it anywhere that they can. And, from our point of view, for states first to be less reliant on hydrocarbons, including ourselves, is a good thing, because of environment and energy supply, but it is also a good thing, because many of these hydrocarbon sources, these oil and gas sources, are in states that I think we would consider to have problematic foreign policies.

Senator CHAFEE. From us, in the Congress, it seems to me we're abdicating a lot of power in these amendments. And if they're—if that relationship between India and Iran is going to continue anyway—there's no guarantee the pipeline won't be built—we've abdicated power to—what? A game.

Secretary RICE. Well, Senator, I don't—I don't think you're—

Senator CHAFEE. Most of these amendments give more power to the President and take away congressional oversight.

Secretary RICE. Well, the amendment to the Atomic Energy Act, we believe, is necessary so that we can have a reliable and predictable nuclear commercial trade with India. The Congress, of course, can—the Congress has, up front—and that's why we're coming to you now—the ability to assess the deal, to look at its upsides and downsides, and then to affirm, in a vote, yes or no, to amend the legislation that you wish to do so. We will also submit the bilateral nuclear cooperation agreement that we would make with India in support of this civil nuclear cooperation, so-called 123 Agreement, would come to the Congress even before the legislation. We have offered to brief the Congress on where we are in the negotiation of this bilateral deal, which is a technical deal to try and implement this civil nuclear cooperation agreement.

So, we believe that there is a lot of congressional oversight. We've tried to come up and do briefings. But we are making a rather fundamental choice, as a country. And that's why we thought that it was important to make the choice up front, in terms of amending the legislation.

Senator CHAFEE. And you mentioned in your statement that Great Britain, France, and Russia have expressed support for this agreement. And you said there's letters from Tony Blair and Jacques Chirac. How about the Russians? Is there any——

Secretary RICE. There were——

Senator CHAFEE [continuing]. Copies of support?

Secretary RICE. Well, there was—there were actually public statements.

Senator CHAFEE. In follow-up, also how about China, also?

Secretary RICE. Yes. There were actually——

Senator CHAFEE. Where are they——

Secretary RICE [continuing]. Public statements——

Senator CHAFEE [continuing]. On this?

Secretary RICE. Oh, certainly, Senator. There were public statements from President Chirac and Prime Minister Blair. The Russians have told us that they support.

The Chinese have said that they have some questions. I would note that, of course, there is a history of Chinese/Indian relations to take into account here, not just China's relationship to the Nuclear Suppliers Group. It is, of course, the case that we engage in the—in civil nuclear cooperation with China, despite our many differences with China, but we are not currently able to engage in civil nuclear cooperation with India, despite our considerable interests in common. And so, that is perhaps one of the explanations for China's concerns. They have not said that they will not support it. They have said that they have some concerns.

I've also talked, Senator, for instance, with the Australians, who—Prime Minister Howard has said that he supports the deal, believes it's a—on balance, a good deal. And I would just point, again, to Mohamed ElBaradei, who is the guardian of the nonproliferation regime and the Non-Proliferation Treaty, who's been a strong supporter of it.

Senator CHAFEE. And how hard did you try to negotiate a deal that could possibly keep the 1954 Atomic Energy Act intact, that would—you don't have to amend it? Was there an effort to negotiate some kind of deal to accomplish that?

Secretary RICE. Well, Senator, the nuclear trade and commerce with India, because India is a—not a member of the NPT, we would have had to do something with the legislation. Now, it's true, as Senator Biden was saying, we could have relied on a year-to-year licensing, which we think would simply disrupt the predictability that is needed for, for instance, companies that wish to deal in the nuclear trade with India. But our goal here was to negotiate an agreement that kept us firmly in compliance with our Nuclear Supplier Group obligations, that kept us firmly in compliance with our IAEA obligations, that did not run afoul of our obligations to the—as members of the Non-Proliferation Treaty. And we were particularly concerned about the permanence of these safeguards. I can tell you that the Indians wanted to negotiate safeguards, for instance, that were not necessarily permanent. That was a red line for us.

So, the negotiation of the deal was in regards to being able to firmly be able to say to you, "We are maintaining our obligations under all of these very important arrangements that we have and

treaties that we have, but there will need to be some change made to existing laws and regulations in order for us to be able to engage in nuclear commerce with India."

Senator CHAFEE. Thank you.

Secretary RICE. Thank you.

Senator CHAFEE. The buzzer has sounded.

The CHAIRMAN. Thank you very much, Senator Chafee.

Senator Sarbanes?

Senator SARBANES. Thank you. Thank you very much, Mr. Chairman.

Madam Secretary, I join my colleagues in welcoming you back before the committee.

I want to try to understand more clearly some aspects of this understanding you've reached. As I understand it, there will be a safeguards regime arrived at with the IAEA, is that correct——

Secretary RICE. Yes.

Senator SARBANES [continuing]. For civilian nuclear facilities?

Secretary RICE. That's correct, Senator.

Senator SARBANES. Now, that's an important dimension, I take it, of this agreement, is that correct?

Secretary RICE. That's correct, Senator.

Senator SARBANES. Are we in a position to examine those safeguards and see what's been agreed to?

Secretary RICE. Well, at this point——

Senator SARBANES. This is going to be an India-unique set of safeguards, is that correct?

Secretary RICE. There will be, but it—it will be India-unique, in the sense that the Indian case is unique. I might just note that the negotiations we—will begin shortly with the IAEA. There are three kinds of safeguards available. They're voluntary safeguards. We've made very clear that we do not—would not favor, in our role in the NSG, voluntary safeguards, because we believe they need to be permanent. Secondly, there are safeguards that are full-scope safeguards. But because India will maintain a strategic program, that is not a civilian program, full-scope safeguards would not apply. And then there is a—this third category, which the Indians and the IAEA will have to negotiate. But I would expect that there—one of the, kind of, indicators of what they might look like is, there are actually four civilian reactors that are currently under IAEA safeguards. We might look to those. But we fully expect these negotiations to take place. And since we are members of the Board of Governors of the IAEA, we would have to approve them in that framework, as well.

Senator SARBANES. But you're not in a position today to spell out for us what the safeguard regime will be, is that correct?

Secretary RICE. That's correct, Senator. We do have to have the safeguards, though. We have to have an agreement on the safeguards—or the Indians and the IAEA have to have an agreement—before this legislation would actually go into effect.

Senator SARBANES. What about before it was passed?

Secretary RICE. We believe that the——

Senator SARBANES. You want us to pass it, not knowing what the safeguards are?

Secretary RICE. Well, Senator, we would like to have the legislation passed. We think that the timing——

Senator SARBANES. Well, I——

Secretary RICE [continuing]. The sequence——

Senator SARBANES [continuing]. Understand that, but we're trying to get a full picture here, and do a proper evaluation.

Secretary RICE. We do think that the safeguards negotiation could take some time. Those safeguards will be clear to everyone at the time that they're undertaken. And, again, nothing in this legislation can take effect until the President determines that there is an acceptable agreement with the IAEA.

Senator SARBANES. Well, I understand that, but that's the President's determination, not a congressional determination, as to the adequacy of the safeguards, is that correct?

Secretary RICE. Well, Senator, it is a presidential determination as to the safeguards. But, again, the safeguards will have to pass not just IAEA muster of the technical negotiations, but also the IAEA Board of Governors. We think there are plenty of——

Senator SARBANES. You're prepared to substitute——

Secretary RICE [continuing]. Safeguards on the safeguards.

Senator SARBANES. You're prepared to substitute the IAEA Board of Governors for the Congress, is that correct?

Secretary RICE. We believe, Senator, you will have a very—we will keep you apprised of the safeguards as they are being negotiated. But we think it could take some time. And we believe that the proper sequence is to go ahead and pass the legislation, to negotiate the bilateral agreement, which will be submitted to the Congress, and will then give you a very strong sense of what is being done, in terms of the nuclear cooperation, and then to have the IAEA safeguards fully negotiated before this could go into effect.

Senator SARBANES. I would like to try to understand why you didn't proceed down the path of using the waiver authority which the President has under the existing Atomic Energy Act, and why you are seeking legislation. As I understand the Atomic Energy Act, the President has a waiver authority, which would enable him to move ahead on this proposal.

Secretary RICE. Well, our understanding, Senator, is that in order to engage in the nuclear commerce—that is, the trade and the transactions—there would have to be congressional action if we didn't amend the law. There would actually have to be congressional action each time a transaction was going to occur. And we think that would actually undermine the stability or the regularity that is needed in developing trade, nuclear trade.

Senator SARBANES. You mean congressional action to approve the waiver?

Secretary RICE. To approve each transaction.

Senator SARBANES. The waiver that would go with each transaction——

Secretary RICE. With each transaction.

Senator SARBANES. Now, under your proposed legislation, is congressional action part of the arrangement?

Secretary RICE. It is, Senator, because we have to submit to the Congress, after it is negotiated, a so-called 123 Agreement, which

is an agreement that is a bilateral agreement between the United States and India on civil nuclear cooperation that comes to the Congress for assent. As I understand it, it's 90 continuous days that the Congress can object, in joint session. But it is—there will be a submission of that document to the Congress. In addition, we are—we want to continue to brief the Congress as this goes forward, so that you are fully apprised of what we are doing in the bilateral agreement. But the bilateral agreement does have to come to Congress. And it would come in conformance with the way that this has been done with others, because of the amendment to the law.

Senator SARBANES. Well, I want to pursue that for a moment. The congressional power, then, would be to disapprove the bilateral agreement?

Secretary RICE. The congressional power would be to either assent or, by two-thirds—is that correct?—or by two-thirds, to disapprove within the 90 days, although the 90 days has to be in continuous session, so that's probably not 90 days——

Senator SARBANES. I don't——

Secretary RICE [continuing]. But much longer.

Senator SARBANES [continuing]. Understand this two-thirds disapproval requirement.

Secretary RICE. Senator, the——

Senator SARBANES. I think you're going to get some——

Secretary RICE. Yeah, let me——

Senator SARBANES [continuing]. Help on this issue.

Secretary RICE [continuing]. Let me just read it here. Yes. Right. So, effectively, it's a two-thirds—yes, they're just going to refine it for me. The—there would have to be a disapproval. And then, of course, the President could override. So, that's——

Senator SARBANES. So, what you've done, or what you're proposing to do, is to shift from the Atomic Energy Act, in which the President could give a waiver to move ahead, but that would require approval by the Congress, to a situation in which the Congress would have to disapprove, in which case the President could veto the disapproval, thereby requiring a two-thirds vote in both houses of the Congress. Is that correct?

Secretary RICE. Well, Senator, the first approval, of course, has to be to amend the act. And so——

Senator SARBANES. Well, I understand that. But I'm looking at the consequences of amending the Act.

Secretary RICE. Well, we thought that the—we think that the proper sequence is that, first of all, up front, Congress has the decision before it to approve the amendment to the Act, or not. At that point, once the Act is either amended or not, we would submit the 123 Agreement to Congress. If we do not amend the Act, then every transaction has to come for congressional approval. And we think that that will disrupt the very basis and the very—the very need here, on an annual basis, of the trade that is actually needed.

Senator SARBANES. I thought the waiver and its approval was on a——

Secretary RICE. An annual basis.

Senator SARBANES [continuing]. On an annual basis——

Secretary RICE. Right.

Senator SARBANES [continuing]. Not every transaction.

Secretary RICE. No, an annual basis. The list of transactions——

Senator SARBANES. You just said every——

Secretary RICE [continuing]. On an annual——

Senator SARBANES [continuing]. Transaction.

Secretary RICE. Well, let me rephrase. An annual—on an annual basis, the list of transactions.

Now, the problem with that, Senator, is that what we're trying to do is to free up the capacity of India and the United States to cooperate in civil nuclear cooperation. Almost all of that is in the private sector, not in the government sector. And the very unreliability and unpredictability of an annual process of the approval of all transactions, we think, would be a pall over the ability of the commercial entities to actually engage. That's not how commercial entities plan. It's not how commercial entities work.

Senator SARBANES. So, your solution to that problem is to move Congress out of the decisionmaking process.

Secretary RICE. No, Senator——

Senator SARBANES. I mean, except for the one decision right at the outset.

Secretary RICE. Well, the decision at the outset really is the critical decision, because, at the outset, I think, what we're deciding, as a country, is, Do we believe that the benefits of having civil nuclear cooperation and civil nuclear trade with India outweigh the downsides?

Senator SARBANES. I'm sympathetic to that point of view. And it's one of the things I'm trying to wrestle with here. But you just told me, a moment ago, that you're backing the Congress out of this process. As——

Secretary RICE. Senator——

Senator SARBANES [continuing]. I understand it, for example, you want the agreement approved before we know what the safeguard arrangements are.

Secretary RICE. Senator——

Senator SARBANES. And your answer to that is, "Well, the President will know what the safeguards arrangements are, because it can't go into place until he makes the determination that the safeguard regime is adequate." But shouldn't there be a congressional determination that the safeguard regime is adequate?

Secretary RICE. Senator, the IAEA safeguards that are negotiated with the—between India and the IAEA——

Senator SARBANES. Has to be approved by the Board of Directors of the IAEA——

Secretary RICE. Well——

Senator SARBANES [continuing]. Correct?

Secretary RICE. That's right. But——

Senator SARBANES. Well——

Secretary RICE [continuing]. Of course, that's——

Senator SARBANES. I don't know that they should be substituted for the Congress.

Secretary RICE. But, of course, Senator, in any agreement that we engage in civil nuclear cooperation or bilateral cooperation, the process is the same. The safeguards are IAEA's safeguards. The 123 Agreement is by assent, not by a vote. And so, the difference

here is that we are asking Congress, up front, to treat India as we treat other partners in civil nuclear cooperation. So, the decision is, Are we going to treat India as we treat other partners in civil nuclear cooperation? At the point that that determination——

Senator SARBANES. This——

Secretary RICE [continuing]. Is made, we would treat——

Senator SARBANES. This is——

Secretary RICE [continuing]. India——

Senator SARBANES. This is further complicated, because other partners, as I understand it now, have undertaken not to produce fissile materials. Is that correct?

Secretary RICE. Other partners are, of course, nuclear—non-nuclear-weapons states, at this point.

Senator SARBANES. Right.

Secretary RICE. But, Senator——

Senator SARBANES. And the nuclear-weapons states have undertaken not to produce additional fissile material?

Secretary RICE. No, Senator. As a matter of fact, there is a—an international effort underway for a Fissile Material Cutoff Treaty, which the United States supports. But we have a moratorium, that's right, on fissile-material production, and we've encouraged others to do that.

But the fact is that we are not asking—once the law is amended, we are not asking for special treatment for—or for a different role for Congress once the change in the law is taking place. Once you change the law, then we are asking for the same process that we would use with any bilateral agreement to do civil nuclear cooperation. The decision, up front, is whether or not to treat India as a so-called "conforming state"—in other words, whether to treat India as we treat others in civil nuclear cooperation. And we thought that this was the right discussion to have, as a country, up front, whether or not we wish to pursue this arrangement.

Senator SARBANES. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Sarbanes.

Senator Allen?

Senator ALLEN. Thank you, Mr. Chairman.

Thank you, Madam Secretary, for being with us. The ranking member, earlier on characterized this as whether or not this would be a "good bet" for us to secure this protocol with India. And when one is thinking of betting, I look at this as a good bet. Two things you look at when you're betting. Number one is past performance. You always like to look at a track record. If it's a horse, obviously its starts and finishes, times, track conditions, and so forth. And then you also want to look at, What's the benefit, what's the payoff in it? And I think when you look at India's past performance, and you look at the benefits to India and to the United States, and, indeed, the—Asia and the world, I think this is a very good bet for our country.

One, as a partnership with a country that is the world's largest representative democracy with us, who is the oldest representative democracy. There's a shared desire for peace in Asia. There's a shared sense of the importance of religious tolerance, individual rights. I think it makes sense for our security, as well.

The energy demand, which has been brought up back and forth here, I think is very important. I was in India last November. The air quality there is just awful. It made me appreciate our clean air here in the——

Senator BOXER. Come to Los Angeles.

Senator ALLEN. Fine. I've been there. My mother lives there. India is worse than Los Angeles.

Senator BOXER. I would hope so.

Senator ALLEN. The people in India have dirty coal, high-sulphur coal. They import a lot of coal. And I think clean coal technology needs to be part of the solution here in the United States, as we're the Saudi Arabia of the world in coal. In India, though, their coal is a very dirty coal. It's a high-sulphur coal. Nuclear power is part of a way for them to clean up their environment.

There also is the realization that our energy, particularly oil, which doesn't necessarily come from this country, but from hostile areas in the Middle East and elsewhere, that the demand for oil, and whether it's in Central Europe, strengthening the economy, India's growing economy, China's growing economy, all that increases the price of oil. And to the extent that oil or clean-burning natural gas is being used for electricity generation, as opposed to transportation or for manufacturing, that affects the United States, as well.

The other aspect—it's tertiary, in my view, but it is important, and that's the economic benefits to U.S. companies, U.S. jobs, and others.

And the question that comes up, Is this going to undermine, somehow, the Nuclear Non-Proliferation Treaty? And why is India being treated differently? Well, India has an exemplary record of nonproliferating materials. Other countries—North Korea, Iran—certainly do not have that record.

I think this is actually bringing them into the regime. There's going to be greater scrutiny, greater transparency, as most of their nuclear power plants will be under that regime.

So, I look at the energy and the economic benefits of this as being important. And most importantly is having India as a partner. We are not going to win the war on terror, we are not going to be able to advance freedom just on our own. We have, throughout our history, whether it's from the secession from Britain to World War I, World War II, the cold war, it could not be the U.S. alone. And India, I think, is a country that can positively impact these goals for our country, and our values. And it's not just going to be a short-term matter. I think this is going to be beneficial for generations to come.

Now, let me ask you, Madam Secretary—and as you know, I've sponsored this, so I'm obviously in favor it, thinking it's a good bet. I think it's an ideal bet, and I'm glad we have the chance to get this done. And I congratulate you and the administration on this, I think, historic breakthrough agreement.

One thing that I've asked, in the past, though, is—India, while they're nonconforming in many respects, I think it would be desirable for India and their government to join the Proliferation Security Initiative. I'd like to pose this question to you. Are you, or is our administration, encouraging, prodding, cajoling—respectfully,

of course—India to join the Proliferation Security Initiative? And do you believe it would be helpful for India to join?

Secretary RICE. We are, in fact, prodding the Indians to do so. And they've shown great interest in the Proliferation Security Initiative. They've had some questions concerning how it might affect certain interpretations that they have about the Law of the Sea. But we have, I think, been answering those for them. And we think they could be a tremendous asset in the Proliferation Security Initiative, given their naval assets and given the geographic location of India. And so, yes, we are very much prodding them. And I hope they're going to participate.

Senator ALLEN. Do you know if that's on their schedule. We're asking about sequencing here, which I do want to follow up on, but where are they in any sort of deliberation?

Secretary RICE. They have told us that they are deliberating it seriously. And we have asked them to deliberate it expeditiously, because we do believe that it would be a helpful signal to not just us, but also to the Nuclear Suppliers Group and to other concerned states about nonproliferation, were they to join the PSI. So, we've asked them to look at it expeditiously. They've promised that they will.

Senator ALLEN. Do you think they would get it done in the next month or so, 2 months or so?

Secretary RICE. We can work with them on that. I think it would really help, particularly here, but also with other members of the Nuclear Suppliers Group. And so, we're making that case with them.

Senator ALLEN. When I was over there, meeting with Prime Minister Singh, naturally, this issue came up, and I brought up the Proliferation Security Initiative. And I think that would be helpful, as we do our due diligence here, that you see that sort of action on the part of India's government in this respect.

On finalizing this U.S.-India Nuclear Cooperation Agreement and the changes here, trying to get the sequencing, we had a previous classified hearing, and I actually asked the same questions, similar to Senator Sarbanes. The sequencing, as I understood it, that—they have to enter into an agreement with the International Atomic Energy Agency, IAEA, with its protocol for safeguards for India. You are suggesting that we have action here in the U.S. Senate before that agreement is reached. Is that correct?

Secretary RICE. That is correct, because we think that the negotiation of the IAEA safeguards, although they've—it will have begun before this—the bill is passed here, or before the bill is considered here—it would have begun between India and the IAEA. Again, they already do have a safeguards agreement on four of their reactors. And so, there's some indication as to what one might look like. But, yes, we believe the negotiation might take some longer time; and so, we would like to pass the legislation and make the entry into force of the legislation contingent on the negotiation of the completion of the safeguards agreement.

Senator ALLEN. All right, you mention there's four of them. Would that be a template that Senators could look at as—the sort of protocol safeguards—the balance?

Secretary RICE. Well, certainly, although, of course, this is much broader. They're now, instead of just—I think 81 percent of their reactors are now outside, they're now going to put two-thirds inside. And so, we're talking about something much broader. We're talking about, also, safeguards on storage facilities for nuclear fuel. So, this is a lot that they're taking on, and we believe that getting the legislation passed and then monitoring and watching the IAEA negotiations will be very important.

Let me just make one further point on that. We rely on the IAEA to determine safeguards around the world. We don't sit in the State Department or in the Defense Department or in the Energy Department, making safeguards agreements with countries. That's why we have an International Atomic Energy Agency. And so, of course we rely on their judgment as to what constitutes a proper set of safeguards. We play a role. We have a lot of personnel who are seconded to the IAEA. But there is nothing unusual about having the IAEA be the negotiator and, in effect—in a sense, the validator of the reliability and significance of—suitability of safeguards.

Senator ALLEN. All right. Assuming the sequencing goes, and this action is taken by the U.S. Senate not disapproving, IAEA approves it. Then it's contingent on them settling an agreement. One thing with India, they do respect the rule of law. That's part of their tradition, which is another similarity with our country. Ultimately, though, after all our action, would not the Nuclear Suppliers Group—that's about 45 countries—then want to act? Would they not have to then act, as well?

Secretary RICE. Yes, this would then have to be submitted to the Nuclear Suppliers Group, which works by consensus. So, yes, it would have to be submitted to them. We have several steps ahead of us.

Senator ALLEN. Thank you. My time's up. Thank you, and congratulations.

Secretary RICE. Thank you.

The CHAIRMAN. Thank you very much, Senator Allen.

Senator Boxer?

Senator BOXER. Thank you, Mr. Chairman. And thank you very much, Secretary Rice.

I share your view that a strong bilateral relationship with India is important. India's a thriving democracy with a growing economy, and developing closer ties between our nations is something I strongly support, in most everything I do. But I do not share the view that closer U.S./India ties will be a counterweight to China, which seems to be one of the unstated, yet driving, forces behind this deal. And I think this type of thinking is not only outdated and dangerous, but it really flies in the face of reality.

Last April, India and China signed 12 separate agreements on trade, security, and transportation. India and Chinese leaders have declared 2006 the year of India/China friendship. And it doesn't appear to me that India has any interest in being a hedge against China. And I believe it's naive to think otherwise. I think it's old-fashioned. I think it's that cold-war thinking.

So, efforts to improve U.S./India relations should be a standalone policy, not tied to a China card. And I don't fault the administra-

tion for seeking an agreement on nuclear cooperation with India. But I think that agreement should be a win for America, and a win for nonproliferation. I don't believe this agreement is.

So, I want to lay out my concerns, and I'll question you about just one of them. I do have five areas.

First, it rewards a nation for not signing the Nuclear Non-Proliferation Treaty.

Second, it will give India the capability to produce more nuclear weapons than it otherwise could. I have information to place in the record from experts that claim it could be that the ability of India to produce nuclear weapons could go up from 6 a year to 50.

Third, it requires a change in current law. And I think Senator Sarbanes was really in—making his point, that the checks and balances of the Congress will be so weakened that suddenly the IAEA, you know, becomes more important to this administration than the Congress, which is putting us in a very strange position, indeed.

And, fifth, I believe the United States gave away more than it received in this deal.

So, I'm going to expand briefly on these points.

First, the deal rewards India for not signing the Nuclear Non-Proliferation Treaty of 1970. As we all know, the NPT is the keystone of international nonproliferation efforts. And thanks to the NPT, more than 180 nations have not developed nuclear weapons. One of the great incentives of the NPT is that non-nuclear-weapons nations are given access to civil nuclear assistance. By allowing India to receive civil nuclear assistance while it continues production of weapons, India is being rewarded.

Second, this deal will give India the capability to expand its arsenal of weapons, as I mentioned before. While U.S. nuclear assistance will only be used for civilian purposes, uranium fuel imports from the U.S. will allow India to dedicate more of its scarce uranium ore for military use.

And this isn't just me saying it. Let's go to a expert in India, who—a strategist, who wrote, in December, the country is short of uranium. It was necessary to, quote, "get imported uranium for India's power reactors so as to conserve all our indigenous uranium for weapons-production purposes." I will spell the name of the gentleman who said that, S-u-b-r-a-h-m-a-n-y-a-m.

Experts believe this deal could allow, again, India to vastly increase its production of nuclear weapons from 6 to 50 a year, and this could touch off an unintended arms race in the region.

Third, the draft legislation proposed by the administration requests that Congress exempt the U.S.-India Civil Nuclear Agreement from several key sections of the Atomic Nuclear Act, including one that prohibits the export of nuclear material or technology to any non-nuclear-weapons state which has detonated a nuclear device. India needs an exemption, because, in 1974, it detonated a nuclear device, and it did so by improperly using U.S. and Canadian civil nuclear technology.

In addition, there is a troubling report that the Institute for Science and International Security has uncovered, quote, "a well-developed, active, and secret Indian program to outfit its uranium enrichment program and circumvent other countries' export control efforts," unquote.

Fourth, the timing of this deal negatively impacts our policy in Iran. And this is what I really—going to ask you about. Now I understand that there is no comparison between India and Iran. But we still have to be consistent, in terms of our policy. Either we want to limit the threat of nuclear weapons or we don't. There's growing evidence that the timing of the U.S.-India agreement is complicating our efforts to pressure Iran.

Just last Wednesday, Germany's foreign minister said the timing of the U.S.-India Nuclear Agreement was, quote, "certainly not helpful to attempts to ensure that Iran does not develop a nuclear bomb." As the Los Angeles Times editorialized last month, quote, "The message to Iran and other nuclear wannabees couldn't be clearer or more destructive. These regimes and others will rightly conclude that the U.S. is interested in stopping the spread of nuclear knowhow only to regimes it dislikes. This undermines U.S. moral leadership on the single most dangerous threat to humankind, the spread of nuclear weapons," unquote.

And I want to take a minute to ask you about Iran, because we are all in agreement about the threat of Iran. I don't think there is a disagreement between anyone here. And you said—in your recent editorial in favor of this deal, you said something that I agreed with about Iran, that they're a sponsor of terrorism, and they have violated their own commitments in defying the international community's efforts to contain its nuclear ambitions. I agree.

So, today we read—or March 27th, excuse me—in a Defense News headline, "India Navy Trains Iranian Sailors." This is very disturbing. You go out of your way, in your op-ed in favor of this deal, to tell us all what we need to know about Iran, and then we have this circumstance. And my question is—this is a 3-year agreement—if they are training Iranian sailors, did you make a condition of this deal their ending this support of Iran's military?

Secretary RICE. Well, thank you, Senator.

First let me just address the first——

Senator BOXER. Would you just answer that question first?

Secretary RICE. Well, first of all, the Indians say that they do have some low-level, military-to-military contacts with Iran. I might just note that they're not the only country that has a strong relationship with—a long-term and strong relationship with Iran. So do many of our best allies. We are, in fact, the ones that did not have diplomatic relations with Iran. But I would just underscore what I said earlier to Senator Chafee, people are reviewing now, and looking under a microscope at what they have been doing with Iran, because Iran's behavior over the last couple of years, which we've noted for a long time, has simply now given people a lot greater pause about their relations with Iran than they had in the past.

I would note, for instance, that India was the only member of the nonaligned movement to vote for the referral of the Iranian nuclear program to the IAEA. So——

Senator BOXER. Madam Secretary, my time is so limited, and I don't—I don't want to interrupt you, but to get you to answer the question. Did you make the ending of this program as part of the deal that you struck? Did you say, "Before we go forward with this,

we want this ended"? I mean, this is the Defense News of the United States of America.

Secretary RICE. Well, Senator——

Senator BOXER. "India Navy Trains Iranian Soldiers." The—two of their ships were in the headquarters of Indian navy's southern command. So, you've got Iranian—you are saying, on the one hand, we're going to allow fuel—nuclear fuel to go from this country to their country, and they've got Iranian ships in port.

Secretary RICE. Senator, there are——

Senator BOXER. So, have you——

Secretary RICE. The Iranians——

Senator BOXER [continuing]. Made this——

Secretary RICE. There are——

Senator BOXER [continuing]. Part of the——

Secretary RICE. There have——

Senator BOXER [continuing]. Deal?

Secretary RICE [continuing]. Been, and probably will be, Iranian port calls in a number of countries——

Senator BOXER. No, this isn't——

Secretary RICE [continuing]. In the world.

Senator BOXER [continuing]. Port calls. This is training of their military. Did you make this part of the deal, yes——

Secretary RICE. Well——

Senator BOXER [continuing]. Or no——

Secretary RICE [continuing]. Senator——

Senator BOXER [continuing]. Because the reason I'm asking is, I think some of us would like to make it a condition.

Secretary RICE. Senator, I'm trying to distinguish for you what is right in that article from what is wrong. There have been Iranian ship port calls in India. The assertion, We understand that they train Iranian sailors," is not right. That is——

Senator BOXER. So, you say that——

Secretary RICE [continuing]. Well, not——

Senator BOXER [continuing]. When they——

Secretary RICE [continuing]. Everything in——

Senator BOXER [continuing]. Say that——

Secretary RICE [continuing]. Is right.

Senator BOXER [continuing]. "Two Iranian warships were docked in a town"—I don't want to pronounce it wrong——

Secretary RICE. In——

Senator BOXER [continuing]. K-o-c-h-l.

Secretary RICE [continuing]. In Kochi?

Senator BOXER. Kochi?

Secretary RICE. Correct.

Senator BOXER [continuing]. "The headquarters of Indian navy's southern command for a training program under a 3-year-old military cooperation agreement with Tehran."

And all I'm asking you is, Don't you think it's in the best interests of America, when we're going to do this extraordinary special deal, to make, as a condition, that they end that relationship?

Secretary RICE. Senator, I think that—again, let me distinguish. There are port calls that have taken place between Iran and India, yes. The Indians say that they do not train Iranian sailors and soldiers. And so, there are military-to-military contacts. But, again,

let me put it in context. India is not the only country in the world that has relationships with Iran. Many of our friends——

Senator BOXER. This is a country we're going to give nuclear technology to. That's what this is about. Lots of other countries do a lot of things. You're not sitting here suggesting that we give them the components to greatly increase their development——

Secretary RICE. Senator, some of the countries——

Senator BOXER [continuing]. Of building nuclear bombs.

Secretary RICE [continuing]. Some of the countries that have relations with Iran, we already do U.S. cooperation on civil nuclear power with.

Senator BOXER. Well, you want a special deal for this country, and that's why it's important—and let, just, the record show that the Secretary—I'm assuming, by her answer, this wasn't even an issue that was brought up. And it's of deep concern to me, and, I'm sure, to others in the Senate.

Secretary RICE. Well, Senator, let me correct the record. The United States has made very clear to India that we have concerns about their relationship with Iran. We've made clear to them we had concerns about the pipeline. We have made clear to them that we had concerns about their initial vote in the IAEA. So, of course we have concerns about——

Senator BOXER. That's not my——

Secretary RICE [continuing]. Their relationship with Iran.

Senator BOXER [continuing]. Question whether we have concerns.

Secretary RICE. But on this——

Senator BOXER. Did we make it part of the condition of the deal? I have concerns when my kids to the wrong things, but I don't just tell them; I have some action that follows it up. So, I just think your words are a bit hollow; specifically on this matter. And if you put it together with what Senator Sarbanes was able to ascertain, that you're really, in many ways, ducking around the Congress, I think this deal has to have more checks and balances. That's it.

And I know my time's expired. And I appreciate your being lenient with me, Mr. Chairman.

Secretary RICE [continuing]. May I just, for the record, again, Senator, state that the Defense News article, as it is written, is not, we believe, correct about the military-to-military relationship between Iran and India.

Thank you.

The CHAIRMAN. Thank you very much, Senator Boxer.

Senator Alexander?

Senator ALEXANDER. Thank you, Mr. Chairman. Is this on now?

Madam Secretary, thank you for coming and being well informed and answering our questions.

As we look ahead, would you suggest that, for our country, if we were thinking about the emergence of three great powers or influences in the world, that it—one might say one might be China, one might be India, and one might be political Islam?

Secretary RICE. I think that would be fair, Senator.

Senator ALEXANDER. And if we were to look at those three, would you say that our prospects for a mutual relationship or partnership might be better with India than it might be with China or political Islam?

Secretary RICE. Well, I think our possibilities for a deep strategic relationship with India are particularly strong, because of our shared values.

Senator ALEXANDER. And I assume you wouldn't suggest that we should think of India, a country of—that will be the largest country in the world, as one of our children——

Secretary RICE. Absolutely not.

Senator ALEXANDER [continuing]. But as a partner that we would try to respect and understand their differences in where they are today and where we are today, and where we both hope to go and see if we have mutual interests.

Secretary RICE. That's right.

Senator ALEXANDER. I would like to focus more on nuclear power and clean air and the environment. Senator Allen talked about energy. And he and I have talked a good deal about in. Senator Chafee and I have worked together on clean air in this country.

And one of the things I would suggest, Mr. Chairman, that we might want to explore, although it's a little bit out of our jurisdiction, is the impact of dirty air in India and China over the next 30 or 40 years on the air we breathe in the United States.

Have you any—I mean, if I'm correct, only about 2 percent of the current power in India is nuclear. Is that about right?

Secretary RICE. That's correct. About 2 percent, yes.

Senator ALEXANDER. Of producing electricity. And in Japan it would be—well, in France, it would be 78——

Secretary RICE. It would be 78 percent in France. And it's, I think, in Japan, about 30 percent, at this point——

Senator ALEXANDER [continuing]. And in the United States, what we have learned in our hearings, in Energy, is that while nuclear power only produces 20 percent of our electricity in the United States, and we use about 25 percent of all the energy in the world, it produces 70 percent of the carbon-free electricity, even though we haven't built a new nuclear power plant in 30 years. So, increasingly, those who are concerned about global warming, about mercury, which is a new pollutant in the air, which we're just now beginning to regulate in the United States, about sulphur and nitrogen, are recognizing that to produce large amounts of clean carbon-free energy, there really is only one technology available today, and that's nuclear power.

Secretary RICE. Right.

Senator ALEXANDER. Do you have any estimate of to what extent the pollutants that might come from dirty coal plants in India and China over the next 30-40 years might end up in the air that Americans breathe?

Secretary RICE. I don't have an estimate of that, Senator. But, obviously, because the particulates that are being released by this dirty air are contributing to greenhouse gas emissions quite significantly—in fact, the emissions in India have increased about 3 percent a year; that's about twice the rate as in the United States—it's obviously contributing to the global problem that we are having with greenhouse gas emissions. And that, for the United States, of course, is a very bad thing.

Senator ALEXANDER. The Senator from California mentioned the unclean air in Los Angeles. We have a similar problem in Ten-

nessee, around the Great Smoky Mountains. I wonder if you have any idea of what percent of the dirty air in Los Angeles comes from India and China, or will, over the next 30 or 40 years, if they were to build coal plants instead of civilian nuclear reactors?

Secretary RICE. I don't have that estimate, Senator, but, obviously, contributing to the global problem with greenhouse gas emissions is a problem for us, as well as it is for the Indians themselves.

Senator ALEXANDER. I know I'm asking you questions that, in some cases, might be best asked of the Environmental—of the EPA and the Energy Department, but I think they're questions that are relevant to our weighing of these balances here. Such a question would be, Madam Secretary—and perhaps if you don't have the answer to this, someone within the administration could—do you have any idea—we've become increasingly concerned about the amounts of mercury that are in the air in the United States—do you have any idea how much of that mercury comes from other countries—in effect, blown around the world and blown into the United States?

Secretary RICE. I don't, Senator, but I'll seek to get an answer for you.

Senator ALEXANDER. As I look at India—and we talk about partnerships—are—is it not true that the United States Senate, last year, approved a $5 billion credit to help a British company, Westinghouse, owned by British, although Westinghouse is in Pittsburgh, to help build civilian nuclear power plants in China? And what were the considerations——

Secretary RICE. Right.

Senator ALEXANDER [continuing]. There?

Secretary RICE. We do—we did, in fact, do exactly that, because we believe that civil nuclear cooperation with China, a country with which we have cooperation, but, of course, we have significant differences, including, I might say, on Iran, for instance, that the need for civil nuclear energy in China, given China's incredible appetite for growth and appetite for energy, was in the best interest of this country, not to mention in the commercial interest of those who could build the power plants. But, yes, we absolutely did agree to that.

Senator ALEXANDER. Is it true, or not true, that if the United States did not help India and China build nuclear reactors for civilian power, that Russia or France or some other country might do that, and, in the process, develop a massive new technology and business that could then be helpful in their own countries in having clean air?

Secretary RICE. Well, Russia already has some activity with China that they've grandfathered in under certain Nuclear Supplier Group decisions. We do note that India's ability to acquire civil nuclear cooperation on a large scale is constrained by their absence of a relationship with the IAEA, which is why we think that getting them a relationship with the IAEA, getting them to agree to certain of the standards that all of us are adhering to, which they've said they are going to do, puts them in a position to get this clean source of energy for an economy that's growing at 8 percent. They're simply either going to have to do it through dirty coal—

and, as you and Senator Allen have been noting, their coal is particularly dirty—or through some other means. They're not going to stop growing to do it, they're going to do it one way or another. And we think that civil nuclear is the—by far, the best path for them.

Senator ALEXANDER. Thank you, Madam Secretary.

Mr. Chairman, I think that what I will do is submit, if it's appropriate, to the Secretary a short series of questions that might require some answers from the Department of Energy or the Environmental Protection Agency, so that all of us can consider that. And they will be aimed at trying to understand what the consequences are if we don't help India and China especially with civilian nuclear power.

[The information previously referred to appears in the appendix to this hearing.]

Senator ALEXANDER. One of the leading natural—or environmental groups, the Natural Resources Defense Council, for example, is deeply concerned about the impact of dirty coal plants in India and China on the clean air in the United States and the rest of the world. That's just mercury, nitrogen, and sulphur. Add to that the global warming issues. So, I think it's important for us to understand that, and understand how that might not just affect the rest of the world, but to what extent that air blows into Los Angeles and into the Great Smoky Mountains and makes it impossible for us to deal with that.

Thank you for the time.

Senator BIDEN. Mr. Chairman, would you give me 10 seconds?

The CHAIRMAN. Yes, Senator Biden.

Senator BIDEN. I'd like to put in the record the CRS report on that issue, and quote from one portion of this, "However, such reductions—the totality of the reductions that would be accomplished by their full-blown nuclear program"—civil—"such a reduction would constitute 2 percent of India's current CO_2 emissions and 3.6 percent of India's energy-related emissions."

It's real, but it's not very significant.

[The information previously referred to appears in the appendix to this hearing.]

Senator ALEXANDER. Well, Mr. Chairman, I would submit that, in place of three or four thousand megawatts—well—or 30—the number of megawatts of nuclear power that India is thinking about building—20-, 30-, 40,000 megawatts, would be 40, 50, or 60 conventional coal plants. That's a lot of sulphur. That's a lot of nitrogen. That's a lot of mercury. And that's a lot of carbon.

The CHAIRMAN. We would appreciate responses from the administration to the Senator's questions.

Secretary RICE. I'd be most happy to get responses for you.

The CHAIRMAN. Thank you, Senator Alexander.

Senator Kerry?

Senator KERRY. Thank you, Mr. Chairman. Is that—I have to deal with this thing.

Senator BOXER. I think it's on.

Senator KERRY. Thank you.

Welcome, Madam Secretary.

Secretary RICE. Thank you.

Senator KERRY. Glad to see you.

Madam Secretary, I was in India, as I think you know—and I thank Secretary Burns for briefing me before I went, having a good discussion about this issue—in January, and I had the opportunity to meet with Prime Minister Singh and his national security advisor and the nuclear—head of the Nuclear Power Commission. And our discussions focused not just on India's nuclear needs, energy needs, as a whole, but also the way that this deal might be helpful to them in the long run, and, needless to say, how this deal is important to the relationship between our two countries. I understand that. I think we all understand that.

I heard a couple of colleagues talking about, sort of, rewarding India for not being a member of the NPT. I think we have to get over this notion that because of what's happened in past history, we can't deal with new realities that are on the table. If we always stay stuck in the same place, we never advance any ball. That is not to say that I think you have advanced the ball as far as you could have.

I've said this with Secretary Burns, I—this—I'm inclined to support this agreement. And I said that in India, I support it in principle, because I think it's important to our countries, I think it's important to bring more of India's program under the IAEA safeguards. That is important. You have to ask yourself a simple question. If you want to sit there and say, "Gee, they stayed out of the NPT for all these years, and, therefore, we're going do something—we ought to get something for it."

Now, some people think we ought to have gotten more for it. I happen to believe that. It's not where we are. It's not the deal I would have negotiated, personally. I think there was a great opportunity here to deal with the overall proliferation issue of the region, including Pakistan and China. And proliferation is not just the movement of information and technology to other countries, it is also the building of weapons. And this clearly allows that continued building of weapons. But, you know, the perfect world is not, sort of, what's in our hand here. And I understand that. I do think you could have gotten closer to that. And I wish you had.

But the fact is, it is better to build this relationship. It is better to move us forward, in terms of the controls that will exist on the rest of what is defined as the civilian program.

Now, India has the right to define what's going to be in the civilian and what's out. And some people have issues with that. I would hope that in the next days—and I've suggested this to Secretary Burns, and I think it would help you enormously with Congress, and I hope India is listening to this, and they're hearing some of the reluctance of some members—if we could try to find a way to advance the fissile material cutoff efforts, and if India itself could be helpful in these next days in perhaps helping us to rapidly define the IAEA safeguards standards—I am very uncomfortable, though I want to help—and I think I'm inclined to say we should—we have to move forward here—I think you all have a responsibility to try to do the best we can in the next days to make that an evenhanded process between the Congress and yourselves and India.

I think Senator Sarbanes asked very important questions with respect to that. I heard them from back in my office. I am uncomfortable voting to change the overall structure without seeing those safeguards, knowing what they're going to be. And it seems to me reasonable, eminently reasonable, for you to press this process, given the concerns many members have, to help us to see those, to share that. And I think you'll find a Congress far more prepared to move forward more easily and with greater confidence if we were to do that.

So, I would ask you whether or not it's not possible, really, to try to guarantee to the Congress—I know, in the briefing with Secretary Burns, I think his opinion was that that was important and might be done. And I wonder if you might, sort of, give us that confidence here today.

Secretary RICE. Well, we will certainly press it, Senator, both the Fissile Material Cutoff Treaty and the IAEA safeguards. During the recent visit of Mr. Saran, I told him, in no uncertain terms, that this was going to be an issue with Congress and that they ought to negotiate with the IAEA as quickly as possible. I'd be—it would be a problem to undertake a guarantee, but what I can guarantee you is that we will make every effort that we can to accelerate and push that process forward.

Senator KERRY. And what about the—what about the notion of advancing some of these other issues that were left off the table that might give——

Secretary RICE. Yes.

Senator KERRY [continuing]. Congress greater confidence with respect to the fissile material cutoff or even the broader nonproliferation regime itself, which really needs an infusion of restructuring——

Secretary RICE. Yes.

Senator KERRY [continuing]. And greater urgency?

Secretary RICE. Well, on the FMCT, absolutely. We are trying to get the work done on that, ourselves. We've told the Indians they need to be helpful in that. They've promised that they will, and we will press them very hard to help us on the—and they should know, too, that, by the way, it's one of the determinations that the President will have to make. So, we have that leverage.

Secondly, on the broader proliferation regime, I agree with you, Senator. One of the reasons, I think, that Mohamed ElBaradei has been in favor of this is that there is much that India can do, as a big state with nuclear technology, to enhance our ability to, for instance, criminalize the behavior of those who trade in nuclear technologies. They have just passed a very strong act against this kind of activity, in 2005, which would criminalize—it's much more like our law—criminalize, in a much more comprehensive way, any behavior that is betting the trade in weapons of mass destruction technology. I think that's the kind of thing that they can do.

Also, by adhering to these various regimes—the missile technology control regime, the NSG guidelines—they can help us to expand the concept of what is the nuclear proliferation regime, because the NPT is an important part of it, but we clearly need more than the NPT. And I want to emphasize, again, that, on the Proliferation Security Initiative, we will press very hard.

I should just mention, Senator—you are well aware of these efforts, but—because they started not with our administration, but go back to other administrations—we would like to see, obviously, in the regional sense, in the relationship between India and Pakistan and others, look at regional moratorium on fissile material production. We've made it very clear that we would encourage that, that we would encourage India and Pakistan to look at their nuclear relationship in the way that, in some of the earlier days, people were concerned about safety and security between the U.S. and Soviet arsenal. So, there are lots——

Senator KERRY. Let me ask you——

Secretary RICE [continuing]. A lot of things that we could do.

Senator KERRY [continuing]. Did you explore—I mean, one of my concerns—I raised this issue with both the prime minister of Pakistan and President Musharraf, and there seemed to be a spark of interest—maybe they were just—maybe they were being kind, but there seemed to be a genuine spark of interest in the notion of trying to arrive at some agreement regionally on the numbers of nuclear weapons. And it seems to me that that's a place where the United States could have offered real leadership, is trying to bring the parties together. It's hard to understand why they would need to continue to build levels beyond an adequate deterrent between each other and China. Did you explore that?

Secretary RICE. Well, what we couldn't achieve, and I think it was unlikely, was a constraint unilaterally by any one state. But the idea that has been pursued in some second-track arrangements, some second-track discussions, of discussions between the parties about not just absolute levels, but also safety and security and confidence-building measures, because it's something we're very interested in and we'd like to pursue.

I think, Senator, we now have the kind of relationship with the two that might make it worthwhile. I can't say that it's going to have an immediate payoff. These things are hard. But——

Senator KERRY. This—you know, this really shouldn't——

Secretary RICE [continuing]. Very interested.

Senator KERRY [continuing]. That hard. The United States and Russia, under the leadership of President Reagan, came out at Reykjavik, if I call, and said, "We're going to go down to zero." Now, we backed off of that, and I think we're going to 2500, from tens of thousands. If we could do it, the two great superpowers on the face of the planet, and everyone understands the absurdity of that kind of a conflict, so the adequacy of deterrence is defined—China has gotten along for 40 years quite effectively with, I think, in the double-digits numbers. I'm not going to go into classified areas here, but we all know that it has been a meager program compared to both the former Soviet Union and the United States. And they've been content to feel they have a sufficient deterrent.

So, it is absurd to believe that they have an interest in building up. And certainly India, if China has not, and is relatively even with respect to—Pakistan doesn't—the entire nonproliferation structure could have been advanced if the United States had put on the table that notion, and pushed for it.

Now, it's not within this agreement. And I understand that. That doesn't mean we shouldn't move forward here. But I would love to

see the administration be more aggressive. I mean, even the last meetings that took place, we were not particularly engaged. We need to lead on this. And, I might add, it is hard to lead when we have, in our own budget, money for a new nuclear weapon, a so-called bunker-busting nuclear weapon. I mean, as other countries make judgments about their own deterrents and their own threat-response needs, they measure what other countries are doing. And if we, indeed, are the ones who are moving forward with a new concept, it sends shivers down their spine, and their defense establish, just like ours, comes to them and says, "Hey, boys, better start to respond."

So, I would hope you would really have a larger vision with respect to how we could ratchet this down. And, within that context, I don't think you'd find many Senators saying no to this.

Secretary RICE. Thank you, Senator. We obviously would like to see the tensions in the region continue to abate, as they have been. I think we believe that we've built relationships with India and Pakistan that allow us to pursue some of the ideas that you're talking about. And they are certainly much like the ideas we'd like to pursue.

Thank you.

Senator KERRY. Could I just ask quickly, How will the United States react is China presses for a Pakistan exception similar to the India exception?

Secretary RICE. We've been very clear, publicly, privately, with China, with Pakistan itself, that Pakistan is not an appropriate state for this kind of an exception. It's just a different history——

Senator KERRY. What if they make that the price for approval of the India exception?

Secretary RICE. It can't be the price for approval of the India exception. Simply can't be.

Senator KERRY. Could that be a showstopper?

Secretary RICE. I don't believe so, Senator. Nothing that we've had discussions would suggest that. And Pakistan itself understands its own special history.

Senator KERRY. And in keeping with Senator Sarbanes's concern, you would not react badly if Congress didn't write itself out of this process?

Secretary RICE. Well, Senator, we believe very strongly that Congress is not writing itself out of this. We are only asking that, by amendment of the law, we would follow the procedures that Congress would normally follow to approve nuclear commerce with any state.

Senator KERRY. Okay. Well, thank you very much, Madam Secretary. I appreciate it.

Secretary RICE. Thank you.

Senator KERRY. And thank you, Mr. Chairman.

The CHAIRMAN. Well, thank you, Senator Kerry.

Now, just as a management problem here, I've been advised the Secretary needs to leave at 12:05. I would ask the Secretary's indulgence for a moment, as I try to parse, now, 10 minutes to each of three Senators who have not been heard. And I hope the Senators will respect the 10 minutes, because we will be taking a little

bit more of the Secretary's time, and she faces testimony before our House colleagues very shortly.

But if we may proceed—Senator Feingold?

Senator FEINGOLD. Chairman, I will try to keep it under 10 minutes, out of respect for my colleagues. But let me thank you for holding today's hearing with Secretary Rice on the proposed United States/India Nuclear Energy Agreement. This is obviously a very important subject, and—as shown by the attendance here at the hearing.

Madam Secretary, I appreciate your spending time with us today.

And I'd just ask that my full statement be placed in the record.

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

[The prepared statement of Senator Feingold follows:]

Mr. Chairman, thank you for holding today's hearing with Secretary Rice on the proposed United States-Indian nuclear energy agreement. This subject is extremely important and I am pleased that this committee is continuing to take a close look at this complex issue. Madam Secretary, I appreciate you spending time with us today on this very important issue.

I've been troubled by the way the administration has handled this issue from the start: not consulting with Congress prior to announcing a deal that requires changes to U.S. law; submitting legislation asking Congress to remove itself from any oversight; and, pushing Congress to approve this legislation without the benefit of seeing the agreement.

The process problems are not my main concern, however. After reviewing what is known about the deal, which admittedly is not much at this time, I would be hard pressed to explain to my constituents why this agreement is so vital to our national interests, and why it has to be done now. I agree that India is an increasingly important partner and player on the world stage. I also agree that U.S.-India relations are extremely important. Increased efforts to enhance our relationship with India are important. However, our relationship with India does not rest on this one deal, nor should it. Whether this deal goes through or not, India will likely continue to pursue its relationships with China and Iran in ways that won't always be in our interest. I also find the energy arguments for this deal unconvincing. India has tremendous and growing energy needs but nuclear energy is not necessarily the answer. There are far more cost-effective, responsible and immediate ways to tackle that problem. Finally, this deal is not guaranteed to promise direct financial opportunities for U.S. companies. India has promised no preferential treatment for the United States and companies from countries such as Russia and France may be better situated to benefit financially.

In addition to providing us with a better rationale for this agreement, the administration must also provide us with a more detailed analysis of the potential negative impact it could have on the nonproliferation coalitions and policy we've painstakingly put together over the last 30 years. The proliferation of nuclear technology, know how, and material may be the top national security threat we face. How does this deal impact that threat? How does this deal impact fragile relationships with countries like Pakistan, South Africa, or China? The answers we've received thus far—mostly assurances that this deal is "strategically important"—do not suffice.

Today will be an opportunity for us all to discuss and make some progress on these very serious issues. I appreciate that Secretary Rice has come before the committee today and I hope that she will provide us with much needed clarity on the proposed agreement with India.

Senator FEINGOLD. I'll be blunt that I've been troubled by the way the administration has handled this issue from the start, not consulting with Congress prior to announcing a deal that requires changes to U.S. law, submitting legislation that asks Congress to remove itself from any oversight, and pushing Congress to approve this legislation without the benefit of seeing the agreement.

The process problems are not, however, my first concern. After reviewing what is known about the deal, which, admittedly, is not much at this time, I would be sort of hard-pressed to explain to my

constituents why this agreement is so vital to our national interests. In addition to providing us with a better rationale for the agreement, I urge the administration to provide us with a more detailed analysis of the potential negative impact this agreement could have on the nonproliferation coalitions and policies we've painstakingly put together over the last 30 years.

The proliferation of nuclear technology, knowhow, and material may be the top national security threat we face, and I fear that this deal could end up making our world less safe, rather than more safe.

But I am glad you're here. And I obviously understand this is a very complex issue. I would just want to ask a few more questions.

Under Secretary Burns has publicly noted that all future civilian reactors built in India will be subject to safeguards; thus, arguing that an increasing percentage of India's nuclear program will be under international controls. But doesn't India get to decide whether a given reactor is classified as civilian or military? So, what's to prevent India from designating all future reactors as military in order to avoid international safeguards?

Secretary RICE. It is true that India makes that determination as to sovereign states. We make that determination, for instance. But the Indians—we believe the incentives, the powerful incentives for them, are on the civilian side, not on the strategic nuclear side. They have 50,000 tons of uranium reserves, more than enough if they wished to use the small percentage of that, that would be required for a military program. It's on the civilian side that you need a lot of nuclear material to fuel a civilian program over a long period of time.

So, we simply think the incentives are in the other direction, and that the Indians are trying to get civil nuclear energy, and that this is something that, of course, people will be able to watch. But it's—I think someone said—maybe it was Senator Biden who said that the Indians are also taking on a set of obligations here with the world, and people will be watching.

Senator FEINGOLD. But you concede that this is entirely within their discretion——

Secretary RICE. It——

Senator FEINGOLD [continuing]. This designation.

Secretary RICE [continuing]. Is, indeed, within their discretion.

Senator FEINGOLD. Thank you, Madam Secretary. You said that the safeguards will be permanent, but India emphasized that these, quote, "permanent safeguards would be predicated on an uninterrupted supply of fuel for civilian reactors." Doesn't that tie our hands, down the road? If, in the future, India tests or uses nuclear weapons or proliferates nuclear technology, will the United States continue to supply fuel for India's nuclear reactors?

Secretary RICE. We've been very clear with the Indians that the permanence of the safeguard is permanence of the safeguards, without condition. In fact, we reserve the right, should India test, as it has agreed not to do, or should India in any way violate the IAEA safeguards agreements to which it would be adhering, that the deal, from our point of view, would, at that point, be off.

Senator FEINGOLD. As you noted, with the world's second largest population and a fast-growing economy, we all have to be con-

cerned about India's energy consumption and production of greenhouse gases. You've said that this deal will reduce India's reliance on coal and oil, but I would argue that there are more effective means of doing so than selling a few nuclear reactors. India's Bureau of Energy Efficiency estimates that improving energy efficiency could save 80 to 20 gigawatts per year, which is more than all the future output from nuclear reactors now being planned. If improving India's energy mix is a primary motivation of this deal, have you considered other non-nuclear approaches, like a cooperation agreement that would help India improve its energy efficiency?

Secretary RICE. We intend to do all of that. In fact, on a multilateral basis, through the Asia-Pacific Partnership, which is India, South Korea, the United States, Australia, we are engaged also in questions about energy efficiency, about other kinds of energy technology, trying to use other sources of renewables. So, that piece, we are doing. But it doesn't obviate India's growing need for nuclear energy as a part of the mix.

Senator FEINGOLD. Finally, according to an article by Dr. Leonard Weiss for the Bulletin of Atomic Scientists, only 1 percent of India's electrical capacity is fueled by oil. So, replacing this tiny amount with nuclear power won't even register on the world oil market. Do you maintain that this deal will have a major impact on India's oil consumption and on the price that U.S. consumers would pay for oil?

Secretary RICE. Well, India does need to change its mix. I—the point—of course, they use principally coal, which is very, very bad for the environment, given the nature of their coal. But because they are trying to diversify away from coal, they are looking at other sources, and right now, while the percentage from oil is somewhere in the 30 to—some people say as much as 50 percent, but let's say it's at the 35 percent—as they diversify, you would like that diversification from coal not to go to oil, which is one way that it could go, but, rather, from that diversification for coal—from coal to go to multiple other sources that are clean and that do not require further hydrocarbons, and that do not require their dependence on what we consider to be, and we believe we are convincing them, are unreliable suppliers.

Senator FEINGOLD. Thank you, Madam Secretary. In order to give my colleagues a chance, Mr. Chairman, I'll defer, at this point.

The CHAIRMAN. Well, thank you very much, Senator Feingold, for your thoughtfulness. I appreciate that.

Senator Nelson?

Senator Bill Nelson: Thank you, Mr. Chairman.

I'm going to be brief because I want my colleague to have plenty of time also.

Madam Secretary, I might say that you have a very fine representative in Secretary Burns, whom I have talked to extensively about this issue.

I'm concerned—earlier, it came up with Senator Boxer—about this article that appeared in the Post today about the Indian port call by an Iranian warship. And so, in following up on the earlier discussion, is the Indian military cooperating in any way with the Iranian military?

Secretary RICE. The Indians have told us that they have some, as they characterized them, low-level military-to-military contacts. But, again, Senator, I would just note that there are a number of countries that have relations with Iran, and it's, of course, the sovereign right of a country to have relations with whomever they would like to have relations. I believe we're not going to do better in pulling India toward us by insisting that they cut off relations with other states. I don't think that's going to work very effectively. But the entire world is coming to think differently about its relationships with Iran. We see it in the exodus of banking and financial institutions from Iran. We see it in the vote that India took in the IAEA Board of Governors. This is a relationship that goes back a very, very long way. But as Iran changes its relationship with the rest of the international community, I think you're going go to see more and more states reassessing their relationships with Iran.

Senator Bill Nelson: Well, I certainly hope that's the case, that the entire world is reassessing and will do something about it afterwards because, at least from this Senator's point of view, the nuclearization of Iran would be one of the greatest destabilizing threats to the interests of the United States.

Secretary RICE. I could not agree more, Senator.

Senator Bill Nelson: I'm interested in the implications of this agreement with India, with regard to that. What do you think are the implications of this agreement for our diplomatic efforts to convince Iran to give up its nuclear processing?

Secretary RICE. Senator, I just returned from a very long meeting with the other members of the "P5 plus Germany," and I can tell you, the India deal did not come up in this long, long meeting on Iran.

Now, I know that there are those who say, "Well, you're treating India differently than you are proposing to treat Iran and North Korea." Yes. India is a democracy, a transparent society. Iran is the central banker of terrorism, a nontransparent society. North Korea, even less transparent than Iran. North Korea and Iran have, of course, broken their—first of all, signed the Non-Proliferation Treaty, but then have not lived up to those obligations, flaunted those obligations. India is trying, having never signed the NPT, to move toward the taking on voluntarily of obligations that are similar to those of NPT states. And so, the situations are just very different. And I think if we allow the Iranians and the North Koreans to say that we cannot have civil nuclear cooperation with a good actor like India because we have to deal with their bad behavior, then that would be a very bad thing for U.S. policy. And so, I don't think it has an effect.

I should just note, too, that, by the way, the civil nuclear—the possibility of civil nuclear power is something that the world is offering to Iran. But what has been said is, "You can't have civil nuclear cooperation that has enrichment and reprocessing on Iranian territory because of your very bad past history over the last 18 years in violating your IAEA agreements."

So, on the one hand, we have a democratic, transparent state that has not violated agreements that it signed onto—it didn't sign onto the NPT—and states that are wantonly violating those agreements, supporting terrorism, nontransparent, repressing their peo-

ple. I just think there is any comparison, and I don't think we should allow one to be made.

Senator Bill Nelson: Mr. Chairman, I want to give my colleague plenty of time to ask his questions.

I will follow up with you in further discussion about how we can bring China and Russia around to our point of view, how it's in their interest to have a non-nuclear Iran, and what more we can do in Europe to get those who are resistant there to achieving that goal. This ought to be an all-out effort.

Secretary RICE. Thank you, Senator. I look forward to the conversation, yes..

Senator Bill Nelson: Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much, Senator Nelson, for your thoughtfulness to the committee and to your colleague.

And now, the colleague that you have mentioned, Senator Obama?

Senator OBAMA. Senator Nelson is a fine man. [Laughter.]

The CHAIRMAN. I agree.

Senator OBAMA. Madam Secretary, thanks. You know, I'm always batting last in the line-up, so I don't always know if I'm being redundant in some of my questioning. Forgive me if some of these questions were posed earlier and you already answered them.

Just a brief statement, at the opening. I personally think that the geopolitics of this agreement make a lot of sense. And I suspect that's shared by many at this table. I think that India is a critical long-term partner for the United States. As you've noted, they share our values. There are deep commercial and personal relationships between the two countries that I think need to continue to grow. India is only going to continue to be a larger player on the world stage, and they occupy an important piece of real estate, in addition to having a billion or so people.

So, there is really no argument with respect to the geopolitical issues. I also think that it's legitimate to say that India—the nature of the society and its democracy and its government are different from Iran. We can make easy distinctions, I think, between India and other nations that might be pursuing nuclear arms. They've shown themselves to be responsible, so I think we can concede that, as well.

Having said all that, there are specifics to the agreement that I have concern about. So, let me just be clear—if I'm understanding this properly. You've got 22 nuclear plants, 14 now under the agreement would be subject to IAEA safeguards, 8 would be off limits from IAEA inspection. My understanding, is that the eight that are off limits will be producing large amounts of nuclear material; that, as a consequence of those eight not being under the inspection regime, that this agreement could free additional weapons-grade material to India that they can use, should they decide. Now, it's a question as to whether it would be in their interest to do so or not, but should they decide they want to produce more weapons, this agreement could free up additional material that would allow them to build more weapons. Do you think that that is a accurate characterization or an inaccurate characterization?

Secretary RICE. Senator, I don't think it's accurate, for the following reason. Of course, currently 81 percent are outside, so we

will now have 65 percent inside. And the—of the reactors inside safeguards—but the Indians have very large stores of uranium—large reserves of uranium, maybe 50,000——

Senator OBAMA. So, you think it matters.

Secretary RICE. It doesn't matter. And if I could——

Senator OBAMA. Because they've got enough nuclear——

Secretary RICE. They—if they wanted to build more——

Senator OBAMA. Okay.

Secretary RICE [continuing]. Nuclear weapons, they can do it.

Senator OBAMA. All right.

Secretary RICE. The incentives are on the other side. But the constraint is actually on the civil side, because you need more material on the civil side——

Senator OBAMA. Okay.

Secretary RICE [continuing]. Because of the—it takes much more material on the civil side than on the military side.

Senator OBAMA. No, I understand. So, let me restate the point, then. Precisely because the Government of India needs more material on the civil side, they're confronted with a choice as to, "Do we use more nuclear material on the military side or the civilian side?" I may be wrong on this, so——

Secretary RICE. It's just——

Senator OBAMA [continuing]. Explain.

Secretary RICE [continuing]. Such a small percentage that you need on the military side. That's really the point. It's a very small percentage that you need on the military side.

Senator OBAMA. Okay.

Senator OBAMA. My understanding, though, is that we are transferring technology or training to them, to the civilian side, but that the 14 that are within the inspection regime and the eight that are not are more or less identical. So, whatever we're giving to them is going to be made available—it is transferable to the eight that are not.

Secretary RICE. Well, the fact is, they know how to make nuclear weapons. We know that.

Senator OBAMA. Right.

Secretary RICE. And so, there isn't a technology transfer issue here. This isn't——

Senator OBAMA. Okay.

Secretary RICE [continuing]. A knowhow issue, as it is with the Iranians. And, again, I would just emphasize that the pressures are on the civilian side. The amount of material that you need on the military side is pretty small.

Senator OBAMA. Okay. So, the basic argument that the administration making—is making, then, is that this doesn't really matter.

Secretary RICE. It doesn't constrain their——

Senator OBAMA. It doesn't constrain them. If that's the case——

Secretary RICE. But it also—it doesn't also——

Senator OBAMA. If that—if that's—if it doesn't constrain them, why bother checking on the 14?

Secretary RICE. Well, because——

Senator OBAMA. Why are we going to make a bunch of IAEA inspectors wander around 14 power plants if what you're arguing is, "They've already got the technology, they've got enough material,

they're entirely trustworthy"? What is it that we're gaining as a consequence of putting them under this inspection regime?

Secretary RICE. Well, let me just make the point and complete a sentence. It doesn't constrain their program. We don't constrain it now. This agreement does not constrain it. It also doesn't enable it in any way.

Senator OBAMA. Right.

Secretary RICE. And so, those who are arguing that somehow because of this agreement you're enabling a larger program, we—is simply not right.

Senator OBAMA. Okay, but——

Secretary RICE. Now, as to what you gain, the IAEA, right now, has very little access to the Indian program at all. There are four Russian reactors that are safeguarded. That's it. It also has no access to the future development of the Indian nuclear program. And as India puts more and more nuclear power online, you will capture now a much larger percentage of the Indian civil nuclear program. The Indians themselves estimate as much as perhaps 90 percent over the next decade or so. So, you're getting more and more of the program under safeguard. You're also engaging——

Senator OBAMA. What does that mean, specifically?

Secretary RICE. It means, specifically, that as new civilian reactors come online, and others are decommissioned, you are getting more and more of the Indian higher-and—higher-technology reactors under safeguard. So, the program is moving from unsafeguarded to the middle, where we are now, which is 65 percent of it's safeguarded, to getting more and more of them under safeguard over the next decade or so, where we believe it'll be as much as 90 percent of the program.

Senator OBAMA. But even if it's 90 percent—I mean, when it—what you've just argued is that as long as the—they've got the technology and they've got the material, that they can produce as many weapons as they want. What is it that we are gaining—specifically?

Secretary RICE. You're gaining IAEA access. And this is the point that Mohamed ElBaradei made. You're gaining IAEA access, to the Indian program, that has not been there in the past. You're also getting them to separate. One of the things that the IAEA very much likes to see—and, by the way, we went through this process, the French went through this process—is the separation of military and civilian facilities. It's a very important step, to separate those, and to safeguard those. You are getting the Indians into a regime where they may be able to share in technologies that will produce reactors that do not have the high-byproduct nuclear—or nuclear materials——

Senator OBAMA. On the civilian side.

Secretary RICE [continuing]. Byproducts on the civilian side. That's very important. And let me just say, Senator, I think those who concentrate on the strategic program and the issue of how much weapons material they have, really that's not the point of the Indian strategic program. The Indian strategic program, I believe, if you look at the restraint that it has demonstrated, is more a factor of the political and military factors that they face, in terms of what their other, as they would see them, adversaries in the region

are doing, what military balances they are facing. And that which—is what drives the numbers of Indian nuclear weapons, not how much material they do or do not have.

Senator OBAMA. Well, if that's the case, why don't they put it all under IAEA inspection?

Secretary RICE. They want to reserve the possibility, given the neighborhood that they live in, and given the——

Senator OBAMA. Yeah.

Secretary RICE [continuing]. Politics that they have engaged in, the politically adversarial relationships that they've had in that region, to increase their strategic program. But I would, again, note that the restraint has been considerable. It remains a relatively small program——

Senator OBAMA. I understand. I guess—I don't mean to interrupt you, Madam Secretary, because I'm running out of time, and you've got to get going in a minute—my simple point is this. I mean, you sort of can't have it both ways. You can't say that the—on the one hand, the strategic issues really are not relevant here, they're not going to be increasing their nuclear stockpiles, there's not serious technology transfer, et cetera, et cetera, but it's real important, nevertheless, for them to keep these eight uninspected and to remain outside of—to remain outside the regime.

Secretary RICE. Senator, we didn't set out—we discussed, initially, but we didn't set out to constrain the strategic program in this agreement. There are other things that constrain their program, including just the politics and military balance of the region. That's really the issue with their strategic program.

What this agreement sets out to do is—in the broad framework of U.S./India relations and India's emergence as a major power, is to give them relatively unconstrained access to civil nuclear power, which we think is a very good thing. They do need fuel for their civil nuclear reactors. They don't have indigenous supplies that can fuel a civilian program of the size that they need to meet their energy needs. Since we think meeting their energy needs with civilian power is a good thing, we would like to see them have access on the civilian side, but that requires IAEA safeguards.

Senator OBAMA. Let's shift gears. I have—I'm out of time, but I think you have 2 minutes before you have to leave, and I want to see if I can get one more question in.

Australia signed an agreement with China on Monday to sell uranium for use in China's nuclear power plants. When asked about possible U.S. opposition to the deal, senior Australian official in the Department of Foreign Affairs said that the U.S. was, quote, "hardly in a position to criticize the sale of the uranium for peaceful purposes to China after announcing that it would seek an exemption from Congress to sell fuel to India for its civilian nuclear plants."

Pakistan's foreign minister was quoted as saying, quote, "Nuclear weapons are the currency of power, and many countries would like to use it. Once this goes through, the NPT will be finished. It's not just Iran and North Korea. Brazil, Argentina, and Pakistan will all think differently."

Are you suggesting that there's not going to be any consequences, in terms of the NPT regime, and that people's basic attitude is that we're now going to, on a case-by-case basis, make determinations?

Secretary RICE. Well, first of all, I think you have to take those each separately. In Australia, yes, they're going to sell uranium to China. We have civil nuclear cooperation with China. China is a member of the Nuclear Suppliers Group, a member of the NPT. I don't think we have, in fact, criticized this deal. And Prime Minister Howard has made clear that he thinks the U.S./India civil nuclear deal is a good deal.

As to what the Pakistani foreign minister said, we were in Pakistan shortly after this deal was announced. The Pakistanis understand their special circumstances——

Senator OBAMA. Well, but because we have enough leverage on them at the moment, but we—

Secretary RICE. Well——

Senator OBAMA [continuing]. We may not, always.

Secretary RICE. Well, but they also understand that they have a particular history that they're trying to overcome with the international system.

No, Senator, I really don't think that it is going to have an effect on the—on people's willingness to adhere to the NPT, or not.

Senator OBAMA. So, you think the NPT remains the——

Secretary RICE. I——

Senator OBAMA [continuing]. This will have no impact on NPT or the Suppliers Group.

Secretary RICE. I think that, if anything, what it does is to broaden the nonproliferation regime to include what has been one huge anomaly out there, which is an India that is not an NPT member, but has been in substantial compliance with NPT standards, that has been a responsible party. And that takes care of an anomaly. And, again, I think it's why the guardian of the NPT and the regime, Dr. ElBaradei, has been so supportive of this.

We have to find a way to modernize the nonproliferation regime. And that means keeping the NPT strong, but it also means dealing with anomalies. It means issues like assured fuel supply that countries that forgo—for countries that forgo enrichment and reprocessing. It's a broader regime than just the NPT. And dealing with the anomaly of India, I think, in fact, will strengthen that broader regime.

Senator OBAMA. Unless other countries decide they want their own anomalies.

Secretary RICE. Well, we haven't seen——

Senator OBAMA [continuing]. If this is an anomaly, China may have other views in terms of what constitutes an anomaly—such as Pakistan.

Secretary RICE. Of course we will resist those, but I will just say that this is a deal that is broadly—people are broadly in agreement with who are very concerned about nonproliferation.

Senator OBAMA. Thank you, Mr. Chairman, for your forbearance.

Thank you, Madam Secretary.

The CHAIRMAN. Thank you, Senator Obama.

Secretary RICE. Thank you.

The CHAIRMAN. And, Senator Boxer, I understand you have a request.

Senator BOXER. I do. And I thank you.

I would ask unanimous consent to place the following documents in the record: an article from the Washington Post on March 21 in which Senator—former Senator Sam Nunn says, "India was a lot better negotiator than we were"; the Los Angeles Times editorial that I referred to, dated March 1; the article in Defense News entitled "India Navy Trains Iranian Sailors." We did contact the editors there, and they stand by their story. But we will continue to speak with them.

And then, just—this is important. I think that the Secretary just said that the people in the nonproliferation community support this. Well, we already know that Senator Nunn told us to please work on changing this deal. And we also know that we got a letter—the Senators did—from 16 people in—who are very well-known experts—a couple from Stanford, by the way—who really worry about this very much. At the bottom line, they say, "India's commitment under the current terms of this arrangement do not justify making far-reaching exceptions to U.S. law."

And then, lastly, you'll be happy to know, Mr. Chairman, is an article from today's USA Today in which, "In 2004, the State Department sanctioned an Indian scientist because he said that the Indian scientist was giving Iran information about tritium." And this, again, is a troubling link between India and Iran.

And so, I'd like to place all these in the record.

And I thank you.

The CHAIRMAN. That's fine. We'll place them in the record.

[The information previously referred to appears in the Appendix to this hearing.]

Secretary RICE. Senator, I need to respond to the last point, however, for the record.

The CHAIRMAN. Please respond.

Secretary RICE. Yes, for the record.

First of all, Senator, I think I was talking about Mr. ElBaradei when I talked about people who were in support. That was the lineage of the question.

But, secondly, on the Indian scientist that the Senator cites, under our law there was a violation, and we raised that with the Indian Government. They investigated it. I would note that under their new law, the 2005 law, we believe that this kind of activity would, indeed, be illegal under Indian law. And so, I would just make the point that it's just another example of the Indians moving further into compliance with laws that, frankly, we would like to see a lot of other states have.

Senator BOXER. Well, I'd say to the Secretary, that's very good news. If you could provide me with the law and your analysis of it. Because this was our own State Department, in '04, sanctioning an Indian scientist. But——

Secretary RICE. I——

Senator BOXER [continuing]. But we know what happened in Pakistan with Dr. Khan, so we need to be sure. But what you're telling me is good news, and I'd like to see that in writing.

Secretary RICE. Absolutely. We'll get that——

Senator BOXER. Thank you.
Secretary RICE [continuing]. For you, Senator.
Senator BOXER. Thank you.
Secretary RICE. It's a 2005 law. We will do that.
Senator BOXER. Thank you, Madam Secretary.
The CHAIRMAN. Thank you, Senator Boxer.

Madam Secretary, let me just mention that to the extent that you or your colleagues can supplement our information about the total energy picture, including climate change, and various other aspects that arose, that would be helpful.

The CHAIRMAN. Likewise, we've heard much about the NPT and the Suppliers Group. You've made a good number of points as to how they're enhanced, but this is an area of concern for many of us.

Third, the Iranian issues, how they sort out. We could have several hearings on Iran itself, but, still, this is the world in which we live, to the extent to which those issues can be addressed.

The CHAIRMAN. And, finally, the issue of congressional oversight, assurances of how the administration plans to work with the Congress so that fears that this committee or others might be overlooked might be assuaged.

[The information previously referred to appears in the appendix to this hearing.]

Secretary RICE. Thank you very much, Mr. Chairman.
The CHAIRMAN. And thank you, so much, for your testimony.
Secretary RICE. We will respond.
Secretary RICE. Thank you very much.
The CHAIRMAN. The hearing is adjourned.

[Whereupon, at 12:05 p.m., the hearing was adjourned.]

APPENDIX

QUESTIONS FOR THE RECORD SUBMITTED TO SECRETARY OF STATE CONDOLEEZZA RICE BY SENATOR LUGAR, APRIL 5, 2006

THE PRESIDENT'S VISIT TO INDIA

Question (1)(a). Secretary Rice, during the course of the President's visit to India, and afterward, U.S. officials commented that some 18 agreements were reached with India regarding cooperation in a host of spheres.

With regard to each such agreement, could you furnish the committee with the text of those agreements, if texts exist?

Answer. The relevant documents pertaining to the 18 initiatives undertaken during the President's visit to India are the March 2 Joint Statement, as issued by President Bush and Prime Minister Singh, as well as more detailed Fact Sheets released by the State Department. These documents are included with this package.

In addition, the 18 initiatives are outlined on the attached list of official deliverables for the President's visit.

Question (1)(b). Secretary Rice, during the course of the President's visit to India, and afterward, U.S. officials commented that some 18 agreements were reached with India regarding cooperation in a host of spheres.

Was anything signed by the President while he was in India?

Answer. As these initiatives are not formal agreements or treaties, but rather political commitments that both sides have undertaken, nothing was signed by the President while he was in India.

Question (1)(c). Secretary Rice, during the course of the President's visit to India, and afterward, U.S. officials commented that some 18 agreements were reached with India regarding cooperation in a host of spheres.

Would any of these understandings require Congressional involvement through statutory amendments?

Answer. Only the Civil Nuclear Cooperation Initiative requires legislative changes. As they are currently structured, none of the other initiatives that we have undertaken with the Indian government will require such changes.

THE INDIAN SEPARATION PLAN

Question (1). Secretary Rice, how will the safeguards applied to India's declared sites, facilities, locations and materials, verify that no activities of a military nature are being carried out at any such site, facility or location or with any such materials?

Answer. This Initiative will only allow for nuclear cooperation to proceed with civil facilities and programs that are safeguarded by the IAEA. The Government of India has agreed that these safeguards will be in place in perpetuity. Under the Initiative, India has committed to place all its current and future civil nuclear facilities under IAEA safeguards, including monitoring and inspections. These procedures are designed to detect—and thereby prevent—the diversion to military use of any nuclear materials, technologies, or equipment provided to India's civil nuclear facilities. India has also committed to sign and adhere to an Additional Protocol, which provides for even broader IAEA access to facilities and information regarding nuclear related activities.

Question (2). The Separation Plan tabled by the Indian Government with its Parliament states nothing about the future bureaucratic structure of its Department of Atomic Energy (DAE) in respect of removing from that organization any personnel involved in any military activities. To what extent will DAE personnel working at any declared sites, facilities and locations continue to have access to military programs in India?

Answer. In the July 18, 2005 Joint Statement and under India's March 2, 2006 separation plan, the Government of India committed to separate its civil and military facilities and programs. While the specific issue of DAE personnel has not yet been discussed in detail, we would consider routine, frequent rotation of personnel between civil and military programs as being inconsistent with Indian commitments on separation. In our view, such a rotation would be inconsistent with India's commitment to identify and separate its civil and military nuclear facilities and programs. We have made this position clear to the Indian government.

Question (3). According to India's Implementation Document, facilities were excluded from the civilian list if they were located in a larger hub of strategic significance (e.g., BARC), even if they were not normally engaged in activities of strategic significance. Moreover, the document noted that reactors would be connected to the electricity grid "irrespective of whether the reactor concerned is civilian or not civilian."

(a) Do these two positions of India's negatively affect the extent of separation of civilian and military nuclear facilities in India?

(b) Which facilities (or how many) not engaged in strategic activities were left off the civilian list because they were located in a larger hub of strategic significance?

(c) How many of India's existing eight indigenous PHWRs that are declared as military reactors will remain connected to the electricity grid?

Answer. India's positions on these issues do not negatively affect the extent of separation of civil and military nuclear facilities. The number of facilities declared civil by the Indian government is unrelated to its ability to achieve an effective separation and to place those facilities under safeguards. Regardless of whether they might be used to generate electric power or not, reactors that are not declared civil, and thus are not under IAEA safeguards, cannot legitimately receive nuclear fuel or other nuclear cooperation from any State party to the NPT.

India has committed to providing a declaration to the IAEA of its civil nuclear program; it has not publicly committed to filing such a declaration with respect to its strategic facilities. As such, India may chose not to provide to the IAEA information to answer subpoints (b) and (c).

Question (4). Will Indian officials involved in India's strategic programs have access to India's declared civilian sites, facilities, locations and materials?

Answer. In the July 18, 2005 Joint Statement and as provided for under the March 2, 2006 separation plan, India committed to separate its civil and military facilities and programs. We would consider the term "programs" to include both program-related activities and the personnel involved in those activities. Routine rotation of personnel between civil and military programs would be inconsistent with Indian commitments on civil-military separation.

Question (5)(a). Under Secretary of State for Arms Control and International Security Robert Joseph told members of the committee on November 2, 2005, that India's separation of facilities must be credible, transparent, meaningful, and defensible from a nonproliferation standpoint. He also told members that a separation plan and resultant safeguards must contribute to U.S. nonproliferation goals.

Please describe in detail the criteria U.S. officials used for determining that India's Separation Plan is credible; transparent; meaningful; and defensible from a nonproliferation standpoint; and, . . .

Answer. The criteria were based on the totality of India's separation plan and its commitment on future civil facilities. For the plan to be transparent, it had to be articulated publicly, which it has been. For it to be credible and defensible from a nonproliferation standpoint, it had to capture more than just a token number of Indian nuclear facilities, which it did by encompassing nearly two-thirds of India's current and planned thermal power reactors as well as all future civil thermal and breeder reactors. Importantly, for the safeguards to be meaningful, India had to commit to apply IAEA safeguards in perpetuity; it did so. Once a reactor is under

IAEA safeguards, those safeguards will remain there permanently and on an unconditional basis. Further, in our view, the plan also needed to include upstream and downstream facilities associated with the safeguarded reactors to provide a true separation of civil and military programs. India committed to these steps, and we have concluded that its separation plan meets the criteria established: it is credible, transparent, and defensible from a nonproliferation standpoint.

Question (5)(b). Under Secretary of State for Arms Control and International Security Robert Joseph told members of the committee on November 2, 2005, that India's separation of facilities must be credible, transparent, meaningful, and defensible from a nonproliferation standpoint. He also told members that a separation plan and resultant safeguards must contribute to U.S. nonproliferation goals.

Please describe the U.S. nonproliferation goals to which the separation plan and resultant safeguards contribute, including where those nonproliferation goals are articulated (e.g., the 2002 National Strategy to Combat Weapons of Mass Destruction or the President's 2004 NDU speech).

Answer. The Civil Nuclear Cooperation Initiative contributes to U.S. nonproliferation goals and represents a net gain for nonproliferation because it will, once implemented, more closely align India with the international nonproliferation mainstream than at any previous time. India has pledged to submit its civil nuclear program to international inspection and take on significant new nonproliferation commitments in exchange for full civil nuclear cooperation with the international community.

As Under Secretary Joseph testified in November, there is no viable cookie-cutter approach to nonproliferation; we need tailored approaches that solve real-world problems. This has been a premise of administration policy since the outset of President Bush's first term, in which he established nonproliferation and counter-proliferation as top national security priorities.

The Civil Nuclear Cooperation Initiative is one such approach. It is consistent with the 2002 National Strategy to Combat Weapons of Mass Destruction which noted, with an eye to "strengthening" nonproliferation, that "[c]onsistent with other policy priorities, we will promote new agreements and arrangements that serve our nonproliferation goals." This strategy, inter alia, underscored that the United States will support existing nonproliferation regimes and work to improve the effectiveness of, and compliance with, those regimes. The nonproliferation-related commitments India has made serve to strengthen the international regime.

In this context, India's commitments also advance key efforts contained in President Bush's 2004 National Defense University speech. In particular, as part of this Initiative, India committed to conclude an Additional Protocol. It also committed to refrain from transfers of enrichment and reprocessing technology to countries that do not already have those capabilities, and to support international efforts to limit their spread. Moreover, India's implementation of its enhanced export controls and of its acceptance of IAEA safeguards will contribute to fulfillment of the objectives of UN Security Council Resolution 1540.

Question (6)(a). Secretary Rice, in November 2005, U/S Joseph stated that "We have sought India's curtailment of fissile material production but have not reached agreement on this issue." Prior to the President's March visit to India, experts who testified before Congress stated that they believed you were seeking to ensure that India's breeder reactors were placed under safeguards in order to establish an "effective" but not explicit cap on Indian fissile materials production.

Since no breeder reactor, electric or thermal, was declared civilian and placed under safeguards in India's March 7, 2006, Separation Plan, do you believe that the administration's proposal for atomic energy cooperation with India could still constitute an "effective cap" on Indian fissile materials production?

Answer. As I testified on April 5, 2006, the "Initiative does not cap India's nuclear weapons production, but nothing under this Initiative will directly enhance its military capability or add to its military stockpile."

The United States successfully obtained India's commitment to work toward the conclusion of a multilateral Fissile Material Cutoff Treaty (FMCT). We continue to call on all states that produce fissile material for weapons purposes to observe a voluntary production moratorium, as the United States has done for many years. Moreover, we also remain willing to explore other intermediate objectives that might also serve such an objective. Finally, as part of our discussions with both India and Pakistan, we continue to encourage strategic restraint.

Question (6)(b). Secretary Rice, in November 2005, U/S Joseph stated that "We have sought India's curtailment of fissile material production but have not reached agreement on this issue." Prior to the President's March visit to India, experts who testified before Congress stated that they believed you were seeking to ensure that India's breeder reactors were placed under safeguards in order to establish an "effective" but not explicit cap on Indian fissile materials production.

What reason did India give for not declaring its extant 40 MWth Fast Breeder Test Reactor (FBTR) to be civilian?

Answer. We cannot speak for the Government of India, of course, but in our discussions Indian officials argued that since the FBTR was still in the experimental stage, India not in a position to accept safeguards on the reactor at this time.

Question (6)(c). Secretary Rice, in November 2005, U/S Joseph stated that "We have sought India's curtailment of fissile material production but have not reached agreement on this issue." Prior to the President's March visit to India, experts who testified before Congress stated that they believed you were seeking to ensure that India's breeder reactors were placed under safeguards in order to establish an "effective" but not explicit cap on Indian fissile materials production.

What reason did India give for not declaring the 500 MWe fast breeder reactor it currently has under construction to be part of its civilian program?

Answer. The reactor is not yet complete. India stated that it was not in a position to place reactors which it considers experimental under safeguards. India committed to placing all future civil power and breeder reactors under safeguards.

Question (6)(d). Secretary Rice, in November 2005, U/S Joseph stated that "We have sought India's curtailment of fissile material production but have not reached agreement on this issue." Prior to the President's March visit to India, experts who testified before Congress stated that they believed you were seeking to ensure that India's breeder reactors were placed under safeguards in order to establish an "effective" but not explicit cap on Indian fissile materials production.

Why does the IAEA list the prototype fast breeder reactor as a civilian power reactor in its Power Reactor Information System database?

Answer. We cannot speak for the IAEA. We note, however, that this may be a matter of semantics. Breeder reactors are neither intrinsically military nor civil. The IAEA's Power Reactor Information System is a database of nuclear power plants around the world, whether they are under construction, in operation, or shut down. The Prototype Fast Breeder Reactor is included in the database, as it could generate up to 500 megawatts of electric power. The IAEA's website lists the Prototype Fast Breeder Reactor as a "power plant," but not as "civil." The IAEA's characterization would have no legal bearing, in any case, on India's decision on how it chooses to characterize the reactor for purposes of its separation plan.

Question (6)(e). Secretary Rice, in November 2005, U/S Joseph stated that "We have sought India's curtailment of fissile material production but have not reached agreement on this issue." Prior to the President's March visit to India, experts who testified before Congress stated that they believed you were seeking to ensure that India's breeder reactors were placed under safeguards in order to establish an "effective" but not explicit cap on Indian fissile materials production.

How many breeder reactors, and of which type, does India plan to build in the future?

Answer. We cannot speak for the Government of India, of course, but in our discussions Indian officials indicated that they may build an additional four breeder reactors. India committed, in its separation plan of March 2006, to place under IAEA safeguards all future civil breeder and civil thermal reactors. While India retains the sovereign right to determine whether future indigenous reactors serve a civil or military function—as it does today—neither we nor our international partners will cooperate with non-civil or non-safeguarded facilities. As such, all externally-supplied reactors and other controlled technologies will necessarily be civil and subject to IAEA safeguards.

NUCLEAR SUPPLIERS GROUP (NSG) GUIDELINES PROPOSAL

Question (1). A publicly-available version of the Department's draft NSG decision, which was circulated at the NSG Experts Meeting in Vienna, Austria, last March, states

Notwithstanding paragraphs 4(a), 4(b), and 4(c), of INFCIRC/254/Part 1 as revised, Participating Governments may transfer trigger list items and/or related technology to the safeguarded civil nuclear facilities in India (a State not party, and never having been a party, to the NPT) as long as the participating Government intending to make the transfer is satisfied that India continues to fully meet all of the aforementioned nonproliferation and safeguards commitments, and all other requirements of the NSG Guidelines.

Does the notwithstanding of paragraphs 4(a), 4(b) and 4(c) of INFCIRC/254 Part I mean that as long as any Participating Government of the NSG is satisfied that India is meeting the criteria in the administration's proposed language, they can export any trigger list items they wish to India?

Answer. The administration's proposed language envisions that, after a consensus decision is reached by the NSG to accommodate civil nuclear cooperation with India, it will be up to each supplier to satisfy itself that India is continuing to meet its various nonproliferation and safeguards commitments. If a supplier has a concern that the criteria are not being met, that supplier would be expected to raise the issue in the NSG. In addition, the other provisions of the NSG Guidelines would continue to apply, and NSG Participating Governments would need to take those into account in considering any possible Trigger List exports.

Question (2). What consultation would apply before such exports would be made by Participating Governments, either bilaterally or within the NSG?

Answer. The NSG Guidelines call for consultations among Participating Governments as appropriate in certain circumstances, either on a bilateral or multilateral basis, regarding implementation of the Guidelines and specifically in "sensitive cases."

Question (3). What are the "other requirements" of the NSG Guidelines that would apply to India that are referenced in the draft decision?

Answer. The exception we have discussed relates to the full-scope safeguards requirement of the NSG Guidelines. Transfers to India would still have to meet all the other requirements of the NSG Guidelines, including:

- Formal recipient government assurances "explicitly excluding uses of any nuclear transfer which would result in any nuclear explosive device";
- Effective physical protection of all nuclear materials and facilities to prevent unauthorized use and handling;
- Transfer of trigger list items or related technology only when covered by IAEA safeguards, with duration and coverage provisions in conformity with IAEA document GOV/1621 (i.e., safeguards in perpetuity);
- Restraint in transferring to India sensitive facilities, technology, and material usable for nuclear weapons or other nuclear explosive devices (including enrichment and reprocessing facilities, equipment or technology);
- Government assurances that any retransfer of a Trigger List item or any item derived from the transferred Trigger List item would be subject to the same conditions and assurances as the original transfer.

Question (4). What information does the administration have regarding the views of the Russian Federation and the People's Republic of China concerning the draft NSG decision?

Answer. The Russian Government supports the Initiative. China has not yet declared a formal position. Since NSG deliberations are generally of a confidential nature, we would be happy to brief the committee in more detail in an appropriate setting on our discussions with NSG partners, including the Russian Federation and the People's Republic of China, regarding the U.S. proposal to accommodate civil nuclear cooperation with India.

Question (5). Do you anticipate that China might seek additional reactor exports to Pakistan as a result of the US-Indian nuclear initiative and the proposed exception to the NSG Guidelines you are seeking for India?

Answer. While occasional news articles have speculated in this respect, we are not aware at this time of any plans on the part of China to seek additional reactor exports to Pakistan.

China became a party to the Nuclear Non-Proliferation Treaty in 1992; it is obligated under Article I not in any way to assist, encourage, or induce any non-nu-

clear-weapon state to manufacture or acquire nuclear weapons. China pledged in 1996 not to provide assistance to any unsafeguarded nuclear facilities in any country. As part of its joining the Nuclear Suppliers Group (NSG) in 2004, China disclosed its intention to continue cooperation with Pakistan under the grandfathering exception to the NSG Guideline provisions requiring full-scope safeguards as a condition of nuclear supply. This cooperation would include life-time support and fuel supply for the safeguarded Chasma I and II nuclear power plants, supply of heavy water and operational safety service to the safeguarded Karachi nuclear power plant, and supply of fuel and operational safety service to the two safeguarded research reactors at PINSTECH. As a member of the NSG, China has pledged—and is expected—to abide by the NSG Guidelines on the transfers of nuclear equipment, technology, and material.

If China did seek to provide additional reactors to Pakistan, it would need NSG accommodation. The NSG operates by consensus, so China would need the support of all other participating governments to proceed. We do not believe that the 45 member states of the Nuclear Suppliers Group would agree to such an accommodation, and we do not support such an initiative with Pakistan.

ENRICHMENT AND REPROCESSING TECHNOLOGY

Question (1). Secretary Rice, the administration has been rightly concerned about the proliferation of enrichment and reprocessing technology. The President's February 2004 NDU speech demonstrated the high priority he places on this issue.

India, as part of its Joint Statement commitments, has stated that it supports "international efforts to prevent the spread of enrichment and reprocessing technology".

Will India not export enrichment and reprocessing technology to any state without a functioning, full-scale enrichment or reprocessing capability?

Answer. As part of the U.S.-India Civil Nuclear Cooperation Initiative, India has committed to refrain from the transfer of enrichment and reprocessing technology to states that do not already have them. India also committed to support international efforts to limit the spread of these technologies.

Question (2). Why does the draft NSG decision circulated last month not limit the export of enrichment and reprocessing technology to India?—Have all NSG Participating Governments already agreed not to transfer enrichment, reprocessing and related technology to India, in particular the Russian Federation?

Answer. The transfer of enrichment and reprocessing equipment and technology is already addressed in the NSG Guidelines, INFCIRC/254/Rev.7/Part 1. Therefore, it was not deemed necessary for the proposed resolution to also address the matter. In this context, we have also indicated to our NSG partners that we do not intend to supply enrichment and reprocessing technologies. Our bilateral agreement for peaceful nuclear cooperation will not permit such transfers to be made under it.

There has been no discussion of possible transfers of enrichment and reprocessing technology to India or any Indian requests for such technology. NSG Participating Governments have made clear that they currently are not contemplating any new transfers of enrichment and reprocessing and in fact have been considering strengthening controls over such transfers.

ADDITIONAL NONPROLIFERATION MEASURES

Question (1)(a)/(b). Secretary Rice, in November 2005, U/S Joseph stated that "In our ongoing dialogues, 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 [AG] and the Wassenaar Arrangement [WA]."

On December 30, 2005, the administration sanctioned Sabero Organic Chemicals Gujarat Limited of India and Sandhya Organic Chemicals PVT Limited, also of India, under the authority of the Iran and Syria Nonproliferation Act of 2000 (PL 106–178) for the transfer to Iran of equipment and technology on the Australia Group list.[1]

(a) What is the status of India's consideration of PSI membership?

[1] 70 FR 77441.

(b) What are the policy and legal reasons India has given for not becoming a PSI participant?

Answer. India has stated that its participation remains under consideration.

India committed in 2005 to participate in the PSI if it was able to join the Core Group of PSI participants that had developed and agreed to the PSI Statement of Principles, or if the Core Group was disbanded. In the summer of 2005, the United States and its partners in the Core Group agreed that the Core Group had served an important function in the process of starting up the PSI, but was no longer necessary and so was disbanded.

More recently, India has linked its decision on PSI participation to its concerns with recently agreed amendments to the Convention on the Suppression of Unlawful Acts at Sea (the SUA Convention).

The United States position is that endorsement of the PSI Statement of Interdiction Principles is a political commitment carrying no legal rights or obligations. Therefore, the United States does not accept India's linkage of the SUA Convention to the PSI. As the PSI is a voluntary initiative, India is free to choose to participate or not participate. We continue to discuss this issue with India and encourage India's participation.

Question (1)(c). Secretary Rice, in November 2005, U/S Joseph stated that "In our ongoing dialogues, 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 [AG] and the Wassenaar Arrangement [WA]."

On December 30, 2005, the administration sanctioned Sabero Organic Chemicals Gujarat Limited of India and Sandhya Organic Chemicals PVT Limited, also of India, under the authority of the Iran and Syria Nonproliferation Act of 2000 (PL 106–178) for the transfer to Iran of equipment and technology on the Australia Group list.[2]

(c) Has India decided to become an adherent to either the WA or the AG (including through harmonizing its export control lists with those of the AG and the WA), and if so, will India announce this decision publicly, and if not, what are India's legal and policy reasons for not joining or adhering to them?

Answer. We have discussed with India the importance of it harmonizing its control lists with those of the Australia Group and Wassenaar Arrangement. To date, we have not received an official announcement by the Indian Government of a decision to harmonize its control lists or to unilaterally adhere to these regimes. We continue to discuss these issues with the Indian Government in the context of our bilateral discussions.

Question (1)(d). Secretary Rice, in November 2005, U/S Joseph stated that "In our ongoing dialogues, 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 [AG] and the Wassenaar Arrangement [WA]."

On December 30, 2005, the administration sanctioned Sabero Organic Chemicals Gujarat Limited of India and Sandhya Organic Chemicals PVT Limited, also of India, under the authority of the Iran and Syria Nonproliferation Act of 2000 (PL 106–178) for the transfer to Iran of equipment and technology on the Australia Group list.[3]

Why will India not adopt controls on items on the control list of the AG?

Answer. India has long argued that it has sufficient controls since its national export control list—the Special Chemicals, Organisms, Materials, Equipment and Technologies (SCOMET) List—is in line with the standards of the Chemical Weapons Convention (CWC), to which India is a party. We have discussed with India the importance of controlling the full range of chemicals, agents, toxins, and equipment in line with the Australia Group (AG).

Question (2). Does India's adherence to the Missile Technology Control Regime (MTCR) mean that it will be considered an "adherent" for purposes of section 73 of the Arms Export Control Act, such that U.S. missile sanctions would generally not apply in the future to India or to countries which sell missile technology to India?

Answer. India would not be considered an "MTCR Adherent" as defined under Section 73 of the Arms Export Control Act (also referred to as the missile sanctions

[2] 70 FR 77441.
[3] 70 FR 77441.

law). Rather, as part of this Initiative, India has committed to unilaterally adhere to the Missile Technology Control Regime (MTCR) Guidelines. The missile sanctions law would generally still apply to a "unilateral adherent" to the MTCR.

Unilateral adherence to the MTCR Guidelines means that a country makes a unilateral political commitment to abide by the Guidelines and Annex of the MTCR. In particular, an MTCR unilateral adherent commits to control exports of missile-related equipment and technology according the MTCR Guidelines, including any subsequent changes to the MTCR Guidelines and Annex. Inter alia, this means that MTCR unilateral adherent countries need to have in place laws and regulations that permit them to control the export of MTCR Annex equipment and technology consistent with the MTCR Guidelines.An "MTCR Adherent" is a specially defined status in terms of Section 73 of the Arms Export Control Act (also referred to as the missile sanctions law). An "MTCR Adherent," as defined in Section 73 of the missile sanctions law, is a country that "participates" in the MTCR or that, "pursuant to an international understanding to which the United States is a party, controls MTCR equipment and technology in accordance with the criteria and standards set forth in the MTCR." India's "unilateral adherence" to the MTCR would not meet this requirement.

THE LEGISLATIVE PROPOSAL

Question (1). Secretary Rice, in November 2005, U/S Joseph stated that "the administration prefers stand-alone, India-specific legislation, but could envision alternatives as well." What would be some of the alternatives you would envision if they were not specific to India?

Answer. At the time Under Secretary Joseph testified, the administration had also considered alternatives that were criteria-based or that amended the Atomic Energy Act more broadly. Based on our assessment, and following consultations with Congress, we believe that the India-specific approach embodied in S.2429 would be most appropriate.

Question (2). Why did the administration decide to ask Congress to except India from certain provisions of the Atomic Energy Act of 1954 (AEA) instead of using the existing authority to exempt a future Peaceful Nuclear Cooperative Agreement with India from the requirements of section 123.a (1)–(9) of the AEA?

Answer. The objectives of the legislation include (1) to be able to treat nuclear cooperation with India similar to nuclear cooperation with various other trading partners and (2) to bring Congress into the process at the front end rather than only at the back end.

To achieve the first objective, we are seeking a change to Section 128 so that future nuclear exports to India will not be subject to annual congressional review. Without the change, this provision would risk disrupting nuclear commerce with India and, in addition, might put U.S. exporters at a competitive disadvantage.

The second objective takes into account the difficulty of putting into place all the pieces necessary for U.S.-India nuclear cooperation—particularly, the U.S.-India agreement for peaceful nuclear cooperation, the India-IAEA Safeguards Agreement, and Nuclear Suppliers Group action to accommodate nuclear trade with India—without knowing whether Congress, in the end, would support the Initiative and vote affirmatively to approve the agreement for peaceful nuclear cooperation. We believe it is important that Congress participate as a partner early in the process.

An additional factor involves the exception/waiver standard under Sections 123, 128, and 129 of the AEA. The existing standard is a determination by the Executive Branch that failure to make the proposed exception/waiver would be "seriously prejudicial to the achievement of United States nonproliferation objectives or otherwise jeopardize the common defense and security." In our view, the decision to facilitate nuclear cooperation with India should be based instead on the nonproliferation measures that India committed to in the Joint Statement, which are reflected in the required Presidential determination under subsection 1(b) of S. 2429.

Question (3). Why did the administration decide to ask Congress to allow the President to waive the application of sections 128 and 129 of AEA with respect to India instead of using the existing waiver authorities available to the President in both sections 128 and 129?

Answer. As noted in the previous answer, Section 128 would require congressional review of the first license in each 12-month period after waiver of the full-scope safe-

guards requirement of that Section; India would not be on the same footing as other cooperative partners, and U.S. exporters to India could be disadvantaged.

Also as noted in the previous answer, we believe that waivers under Sections 128 and 129 should be based on the India-specific determination in subsection 1(b) of S. 2429 rather than on the generic standard in current law.

Question (4). Please explain how any license under 10 CFR Part 110 and 10 CFR Part 810 would be considered, evaluated, coordinated, and, if applicable, reported to Congress under existing law and under the administration's proposed amendment to the AEA for India (as introduced in S. 2429) with respect to exports to India.

Answer. The Nuclear Regulatory Commission (NRC) transmits applications for exports of nuclear facilities and for the initial exports of source or special nuclear material for use as reactor fuel under 10 CFR Part 110 to the Department of State, which is responsible for coordinating Executive Branch Agency (Departments of Commerce, Defense, Energy, and State) reviews of such applications in accordance with the Procedures Established Pursuant to the Nuclear Non-Proliferation Act of 1978, originally published in the Federal Register June 7, 1978, and subsequently amended (the "Procedures"). The Executive Branch is asked to provide the NRC with its judgment as to whether the proposed export would be inimical to the "common defense and security," to confirm that the proposed export will be subject to the terms of an agreement for peaceful nuclear cooperation, and to address the extent to which the applicable export criteria in Section 110.42 are met, as well as the extent to which the recipient country or group of countries has adhered to the provisions of the applicable agreement for peaceful nuclear cooperation.

In reviewing an application for a license to export nuclear facilities or materials, the Executive Branch asks the recipient government to provide assurances confirming that upon receipt the export will be subject to the terms and conditions of a Section 123 agreement for peaceful nuclear cooperation between the U.S. and the recipient country, the ultimate consignee and any intermediate consignee identified in the license application are authorized to receive the export, and appropriate physical security measures will be applied to protect the export.

Applications requiring longer than 60 days for Executive Branch review would be reported to the Congress in accordance with the provisions of Section 126 of the AEA. In addition, Section 1523 of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999, as amended, requires the President to notify the Congress of nuclear exports to non-NATO countries known to have detonated a nuclear explosive device. Non-NATO countries that have detonated nuclear explosive devices are: China, India, Pakistan, and Russia. The President has delegated this responsibility to the Secretary of State, who in turn has delegated the responsibility to the Under Secretary for Political Affairs.

If, after receiving the Executive Branch judgment, the NRC has not completed action on a license application within 60 days, it must inform the applicant in writing of the reason for delay and, as appropriate, provide follow-up reports. The NRC will issue an export license if it has been notified by the Department of State that it is the judgment of the Executive Branch that the proposed export will not be "inimical to the common defense and security"; and finds, based upon a reasonable judgment of the assurances provided and other information available to the Federal government, that the applicable statutory criteria or their equivalent are met.

If, after receiving the Executive Branch judgment, the Commission does not issue the license requested on a timely basis because it is unable to make the statutory determinations required, the Commission will publicly issue a decision to that effect and will submit the license application to the President. The Commission will deny any export license application for which the Executive Branch judgment does not recommend approval.

The proposed legislation would change this process as Section 110.42(a)(6) currently requires full-scope safeguards as a condition of issuing a license for export to a non-nuclear weapon state, unless waived by the President, in which case the provisions of Section 128 regarding congressional review would apply. The proposed legislation would allow for NRC-licensed exports to India notwithstanding the absence of full-scope safeguards and without triggering the congressional review requirements of Section 128. It would also permit the issuance of a license notwithstanding the provisions of 10 CFR 110.46, which would otherwise bar issuance of a license to a country found by the President to have detonated a nuclear explosive device, unless the President has waived the corresponding provision of Section 129 of the AEA.

In accordance with 10 CFR Part 810 and the Procedures, an application to the Department of Energy for authorization to transfer nuclear technology under 10

CFR 810 (Section 57b of the AEA) may be approved by the Secretary of Energy if he determines, with the concurrence of the Department of State and after consultation with the Departments of Commerce and Defense and the Nuclear Regulatory Commission, that the activity will not be inimical to the interests of the United States. In making this determination, the Secretary of Energy must take into account a number of factors, including: (1) the nonproliferation obligations entered into by the recipient government, including the NPT and safeguards agreements with the IAEA; (2) whether the country has a Section 123 agreement for peaceful nuclear cooperation with the U.S.; and (3) recipient government assurances confirming no nuclear explosive use and the right of U.S. Government prior consent to any retransfer of the technology or items produced through the use of that technology.

One of the factors that the Secretary of Energy is directed to consider in determining whether to grant a part 810 authorization is whether the recipient country has full-scope safeguards, but that criterion is not mandatory for the issuance of an authorization (except to the extent required pursuant to Section 128 in the case of sensitive nuclear technology). The proposed legislation would not affect consideration, evaluation, coordination, or reporting of DOE authorizations under 10 CFR part 810 with respect to the range of cooperation provided for under the proposed agreement for nuclear cooperation. To the extent that an authorization under Part 810 involved sensitive nuclear technology (SNT), the proposed legislation (unlike current law) would not require full-scope safeguards as a condition of supply. However, the proposed agreement for peaceful nuclear cooperation will not provide for exports of SNT; the agreement would have to be amended (and the amendment submitted to Congress for review) to allow for such exports.

Question (5). What effect would S. 2429 have on the requirements of sections 126 and 127 of the AEA?

Answer. Section 126 establishes procedures for licensing nuclear exports. Section 127 establishes nuclear export criteria that mirror some of the elements required in an agreement for peaceful nuclear cooperation under Section 123. The provisions in S.2429 would not alter these requirements.

Question (6). What effect would the provisions of S. 2429 have on the Congressional review requirements of section 130 of the AEA?

Answer. Section 130 establishes the congressional review procedures with respect to submissions by the President under Sections 123, 126a.(2), 126b.(2), 128b., 129, 131a.(3), and 131f.(1)(A). Section 130 would be affected by the provisions of S. 2429 in that it would not apply to Presidential actions with respect to India under Sections 128b. and 129; the provisions of the proposed legislation would govern. (Note that both Section 128b. and Section 129 currently provide for congressional disapproval of the President's action by concurrent resolution. In view of the Supreme Court's decision in the Chadha case, Congress would have to enact new legislation to disapprove the President's actions under Sections 128b. and 129; in that sense, the situation is the same under current procedures as it would be under S. 2429.)

Question (7). What effect would the provisions of S. 2429 have on the requirements of section 131 of the AEA?

Answer. Section 131 establishes the requirements relating to subsequent arrangements (as that term is defined in that Section). In particular, alterations in form or content—including reprocessing—of nuclear material subject to the agreement would require consent through a subsequent arrangement. The provisions in S. 2429 would not alter these requirements, with one possible exception. Paragraph 131a.(4) provides that "all other statutory requirements under other Sections of [the AEA] for the approval or conduct of any arrangement subject to this subsection" must be satisfied before the subsequent arrangement may take effect. S. 2429 would affect this provision to the extent that it might otherwise require that Sections 123 or 128 (as set forth in current law) must be satisfied for a subsequent arrangement with India.

Question (8). What effect would the provisions of S. 2429 have on the preparation of a Nuclear Proliferation Assessment Statement with respect to a peaceful nuclear cooperative agreement with India as required under section 123 of the AEA?

Answer. S. 2429 would not affect the requirement for a Nuclear Proliferation Assessment Statement nor the preparation thereof.

Question (9). Under S. 2429, what would trigger termination of U.S.–Indian atomic energy cooperation or nuclear exports, and how do those circumstances compare with the existing statutory language regarding termination of nuclear exports under section 129 0f the AEA?

Answer. Under S. 2429, detonation of a nuclear explosive device by India would render ineffective any Presidential determination there under and, accordingly, any waiver of Section 129 of the AEA based on such determination. That detonation would also trigger the requirement under Section 129(1)(A) to terminate nuclear cooperation with India.S. 2429 would not change the various grounds in Section 129 that trigger the termination of nuclear cooperation with respect to India. It would, however, change the standard for waiving the application of the sanctions. Under current law, the waiver standard is "seriously prejudicial to the achievement of United States nonproliferation objectives or otherwise jeopardize the common defense and security." Under S. 2429, the standard would be based on the nonproliferation measures that India committed to in the Joint Statement as reflected in the Presidential determination under subsection 1(b). In addition, as noted in the answer to question 6 above, the provisions of Section 129 and Section 130 regarding congressional review would not apply to a waiver under S. 2429.

Question (10). Would sections 101 and 102 of the Arms Export Control Act apply to any agreement for cooperation in atomic energy with India under S. 2429, and if so, how?

Answer. The proposed legislation would not affect the application to India of Sections 101 and 102 of the Arms Export Control Act.

Question (11). Under subsection (d) of S. 2429, what effect would a Presidential determination that India has detonated a nuclear explosive device after the date of enactment have on—

(a) nuclear exports by the United States;

(b) the nuclear cooperation agreement itself; and

(c) nuclear exports by other states?

Answer. Nuclear exports from the United States to India would be terminated pursuant to Section 129(1)(A), unless waived by the President pursuant to the waiver standard in current law. This waiver would be subject to congressional review for 60 continuous session days.

The nuclear cooperation agreement would remain in effect as a matter of international law. However, as noted above, exports of nuclear equipment and material to India under that agreement would be prohibited under Section 129; any waiver of Section 129 based on a Presidential determination under S. 2429 would no longer be effective. The U.S. would also have the right to request the return of any nuclear material transferred to India under the terms of the nuclear cooperation agreement.

U.S. law would not affect nuclear exports by other states. Each state's response would presumably be governed by the terms of its domestic law and international obligations, its agreement for cooperation with India, any relevant actions by the NSG (if the state were a member), and its own policy judgment.

Question (12). Under S. 2429, if the President determines that India has detonated a nuclear explosive device after the date of its enactment, his previous determination regarding the section 123 agreement between the United States and India under section (1)(b) "shall not be effective." Do you interpret that language to mean that all U.S. licenses for the export to India of any items requiring a license under 10 CFR Part 110 and 10 CFR Part 810 would be suspended or terminated and that no new licenses would be granted, nor any previous licenses renewed, after the determination in section (1)(d) is made?

Answer. As previously noted, a detonation by India would trigger Section 129, which states that "no nuclear materials and equipment or sensitive nuclear technology shall be *exported* to . . . any non-nuclear weapon state that is found by the President to have . . . detonated a nuclear explosive device" (emphasis added). This prohibition on exports of "nuclear materials and equipment" and "sensitive nuclear technology" would necessitate suspension or revocation of NRC licenses and DOE authorizations (under 10 CFR Part 110 and 10 CFR Part 810, respectively) to the extent that the licenses or authorizations involved such exports (unless the authorized activity had already taken place).

The term "nuclear materials and equipment" is defined in the Nuclear Nonproliferation Act of 1978 (P.L. 95–242) to mean "source material, special nuclear ma-

terial, production facilities, utilization facilities, and components, items or substances determined to have significance for nuclear explosive purposes pursuant to Section 109b. of the Atomic Energy Act." The term "sensitive nuclear technology" is defined in the Nuclear Nonproliferation Act to mean any information "which is important to the design, construction, fabrication, operation, or maintenance of a uranium enrichment or nuclear fuel reprocessing facility or a facility for the production of heavy water [but excluding Restricted Data]."

"Sensitive nuclear technology" could not be exported or imported under the proposed agreement for peaceful nuclear cooperation without an amendment.

Question (13). What is the effect of including the phrase "notwithstanding any other provision of law" in section 1 (a) of S. 2429 on other statutes such as the Iran and Syria Nonproliferation Act, sections 101 and 102 of the Arms Export Control Act, or any other relevant U.S. statutes or Executive Orders that would terminate nuclear commerce or impose sanctions for proliferation activities?

Answer. The phrase "notwithstanding any other provision of law" would affect the operation of other statutes or other provisions of the Atomic Energy Act only to the extent that such provisions would affect the modifications to Sections 123, 128, and 129 that are embodied in S. 2429. Thus, if another law established "competing" modifications to the waiver standard for Sections 128 or 129, the modifications in S. 2429 would apply "notwithstanding" that other law.

Accordingly, S. 2429 would not have any effect on the operation of the Iran and Syria Nonproliferation Act, Sections 101 and 102 of the Arms Export Control Act, or other nonproliferation sanctions provisions (except of course Section 129).

Question (14). If the violations in section 129 of the AEA, and the termination of nuclear commerce for such violations, are not to apply to any agreement for atomic energy cooperation with India, as the administration's legislative proposal states in section 1 (a)(3) of S. 2429, which penalties in other relevant laws would apply to atomic energy cooperation with India if India were to engage in activities that would terminate nuclear cooperation under section 129?—Specifically which other laws would terminate cooperation if India were to—

(a) Terminate or abrogate IAEA safeguards;

(b) Materially violate a safeguards agreement with the IAEA;

(c) Materially violate an agreement for cooperation with the United States as stipulated in section 129(2)(A);

(d) Assist, encourage, or induce any non-nuclear weapon state to engage in activities stipulated in section 129 (2)(B); and,

(e) Engage in cooperation that would result in termination of exports as a result of India's having exported reprocessing technology to a non-nuclear weapon state, except under an evaluation and agreement with the United States, as specified in section 129(2)(C).

Answer. As noted in the answer to question 9 above, S. 2429 would not change the various grounds in Section 129 that trigger the termination of nuclear cooperation with respect to India, but rather would change the standard and process for waiving the application of the sanctions. Thus, Section 129 would still apply to nuclear exports to India under an agreement for peaceful nuclear cooperation, and it would be within the discretion of the President whether to exercise the waiver authority in S. 2429 (assuming he could make the requisite determinations and assuming no detonation after the date of enactment).

With respect to the specific elements of the question above:

(a) The standard U.S. agreement for peaceful nuclear cooperation establishes a right to cease nuclear cooperation and seek the return of transferred items if the other party terminates or abrogates an IAEA safeguards agreement. The right of return is required by Section 123 under these circumstances. In addition, the Export-Import Bank Act provides for a cutoff of Ex-Im Bank programs in support of exports to a country that terminates or abrogates IAEA safeguards (Section 2(b)(4)).

(b) The standard U.S. agreement for peaceful nuclear cooperation establishes a right to cease nuclear cooperation and seek the return of transferred items if the other party materially violates an IAEA safeguards agreement. In addition, the Export-Import Bank Act provides for a cutoff of Ex-Im Bank programs in support of exports to a country that materially violates an IAEA safeguards agreement (Section 2(b)(4)).

(c) The standard U.S. agreement for peaceful nuclear cooperation establishes a right to cease nuclear cooperation and seek the return of transferred items if the other party does not comply with the central nonproliferation provisions of the agreement for cooperation. In addition, (1) the Export-Import Bank Act provides for a cutoff of Ex-Im Bank programs in support of exports to a country that materially violates any guarantee or other undertaking to the U.S. in an agreement for nuclear cooperation (Section 2(b)(4)); (2) Section 530 of the Foreign Relations Authorization Act (FY 1994–95) provides for the cutoff of certain assistance to any country that materially violates an agreement for cooperation (P.L. 103–236); and (3) Section 3(f) of the Arms Export Control Act prohibits sales or leases to a country that is in material breach of binding commitments to the U.S. under agreements concerning the nonproliferation of nuclear explosive devices.

(d) The Export-Import Bank Act provides for a cutoff of Ex-Im Bank programs in support of exports to a country that willfully aids or abets a nonnuclear weapon state to acquire a nuclear explosive device or unsafeguarded special nuclear material (Section 2(b)(4)).

(e) Section 102(a) of the Arms Export Control Act provides for a cutoff of certain assistance to a country that transfers reprocessing equipment, materials, or technology.

Question (15). What standard would the Department use to evaluate the phrase "making satisfactory progress" in section 1 (b)(3) of S. 2429?

Answer. The administration is seeking to have India sign an Additional Protocol with the IAEA prior to the initiation of civil nuclear cooperation, but does not expect an Additional Protocol to be signed prior to submitting the bilateral agreement for peaceful nuclear cooperation to the U.S. Congress. Under the language of paragraph 1(b)(3), it would be a judgment for the President whether the progress achieved by India and the IAEA in working out the terms of an Additional Protocol was satisfactory. This approach takes account of the fact that India's Additional Protocol will necessarily be tailored to its safeguards agreement, and therefore is likely to be negotiated after that safeguards agreement. Subsequent preparations for implementation of an Additional Protocol may also take some time.

Question (16). Why did the administration not include a specified period of time in which the President would submit his subsequent determination under section 1(d) of S. 2429 to Congress after an Indian detonation?

Answer. Provisions of this kind typically do not establish a deadline by which the President must make a determination. Depending on the circumstances, it may not be clear that a detonation has occurred, and thus there would be no clear beginning to the statutory time period. In addition, based on long-standing interpretations of provisions of this kind, if the facts demonstrated that an Indian detonation had occurred, the President would not have the discretion to avoid the legal consequences of a determination by simply refraining from making the determination.

Question (17). Would the subsequent Presidential determination under section 1(d) of S. 2429 apply even if India insisted that such a detonation was a peaceful nuclear explosion?

Answer. The President's determination under Section 1(d) addresses India's detonation of a "nuclear explosive device." This term is used in the NPT and U.S. law to encompass all nuclear explosions, including so-called "peaceful nuclear explosions."

Question (18). How would a subsequent Presidential determination under section 1(d) of S. 2429 be sent to Congress and to which committees would it be sent—would it be a written determination?

Answer. Section 1(d) does not specify. The determination would be notified to relevant agencies and published in the Federal Register for implementation purposes. This approach is consistent with Section 129 and other mandatory nonproliferation sanctions provisions, which do not require a report to Congress upon a determination being made, but rather require a report to Congress in the event of waiver (which would also be the case here, if the President waived under existing procedures of Sections 128 or 129).

Question (19). Are sections 123.a(2), 128 and 129 the only sections of the AEA that are implicated in U.S.–Indian atomic energy cooperation, and if they are not, which other sections of the AEA will apply to U.S.–Indian atomic energy cooperation?

Answer. As described in the answers to previous questions, numerous provisions of the AEA apply or, under particular circumstances, might apply to U.S.-India civil nuclear cooperation in addition to Sections 123, 128, and 129. These provisions include Sections 53, 54a., 57, 64, 82, 103, 104, 109, 126, 127, 130, and 131, but could include other provisions of the AEA.

Question (20). Secretary Rice, in November 2005, U/S Joseph stated that "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."

Could you please provide this committee with a legal analysis that sets forth a detailed examination by the State Department establishing that nothing the administration is undertaking regarding changes to US law, an exception to the Nuclear Suppliers Group Guidelines for India, or any exports of nuclear material or reactors to India from the United States, or from other nations as a result of U.S. policy and legal changes for India, would in any way assist India's nuclear weapons program or in any way break U.S. obligations under the NPT?

Answer. Under this Initiative, all nuclear transfers from the United States to India will be subject to IAEA safeguards. These safeguards will be applied to any source or special nuclear material transferred to India and to any source or special nuclear "used in or produced through the use of" material or equipment transferred to India. The application of IAEA safeguards is designed to ensure that U.S.-origin nuclear items remain exclusively on the civil side of the Indian nuclear program and do not in any way contribute to India's military nuclear program. Implementation of an Additional Protocol is designed to give further assurance of this.

Under Article I of the NPT, nuclear-weapon states such as the United States undertake, *inter alia:* ". . . not in any way to assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices." Under Article III(2) of the NPT, all state parties undertake not to provide certain nuclear material and equipment to any non-nuclear weapon state (which includes non-parties) for peaceful purposes unless the nuclear material will be subject to safeguards.

The NPT does not treat peaceful nuclear cooperation under safeguards as assisting a non-nuclear weapon state to manufacture nuclear weapons. Specifically, Article III(2) establishes the basis under which NPT parties may engage in nuclear cooperation with safeguarded facilities in countries that are not parties and do not have full-scope safeguards.

In *The Nuclear Non-Proliferation Treaty* (the leading treatise on the negotiation of the NPT), Mohamed Shaker reached the same conclusion: "Almost any kind of international nuclear assistance is potentially useful to a nuclear-weapon program. However, the application of safeguards to all peaceful nuclear assistance to non-nuclear weapon States, as required by Article III, provides a means to establish and clarify the peaceful purposes of most international nuclear assistance."

This conclusion is also supported by the practice of the parties to the NPT. The U.S. and Canada engaged in nuclear cooperation with India before and after the NPT entered into force. The supply of fuel under facility-specific (INFCIRC/66) safeguards agreements was understood to satisfy our obligations under the NPT. Even after India's 1974 detonation, fuel was provided to India's safeguarded Tarapur reactors by the United States, France, and Russia. Such fuel supply was understood to be consistent with the NPT. The Nuclear Suppliers Group did not make the political decision to adopt full-scope safeguards as a condition of supply until 1992, reflecting the fact that nuclear supply to a country without full-scope safeguards was not prohibited under the NPT.

The argument that foreign fuel supply could allow India to devote its domestic uranium substantially or even exclusively to its weapons program, should India so desire, does not change this legal conclusion. As previously noted, nothing in the NPT, its negotiating history, or the practice of the parties supports the notion that fuel supply to safeguarded reactors for peaceful purposes could be construed as "assisting in the manufacture of nuclear weapons" for purposes of Article I. Nuclear material and equipment exported by the U.S. to safeguarded activities would not be involved in any stage of the process of manufacturing nuclear weapons.

In essence, nuclear cooperation under safeguards does not fundamentally differ from other forms of energy cooperation (e.g., oil supply, clean coal technology, alter-

native fuels). All such energy assistance would arguably relieve India of its reliance on domestic uranium for energy production. Yet such energy assistance clearly could not be viewed as assisting India in the manufacture of nuclear weapons.

Question (21). Secretary Rice, U/S Joseph stated in November 2005, that "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." Additionally, he noted that "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."

Please provide the committee with a coordinated, interagency examination of all regulatory changes the administration would make to implement US-Indian atomic energy cooperation if its exception to provisions of the Atomic Energy Act, as introduced in S. 2429, were enacted. Such examination should be particular with regard to any relevant portion of 10 CFR Parts 110 and 810.

Answer. In response to question 4 under the heading "The Legislative Proposal," we noted that the proposed legislation would change the process of NRC licensing under 10 CFR 110.42(a)(6), which currently requires full-scope safeguards as a condition of issuing a license for export to a non-nuclear weapon state, unless waived by the President, in which case the provisions of Section 128 regarding congressional review would apply. The NRC would presumably amend this regulation to reflect the new legislation. Similarly, depending on the final wording of the new legislation, the NRC might have to modify 10 CFR 110.46, which would otherwise bar issuance of a license to a country found by the President to have detonated a nuclear explosive device, unless the President has waived the corresponding provision of Section 129 of the AEA.

Also, as discussed in the answer to question 4 under the heading "The Legislative Proposal," the consideration, evaluation, coordination and reporting of DOE authorizations under 10 CFR Part 810 would not be affected with respect to the range of cooperation provided for under the proposed agreement for nuclear cooperation. To the extent that an authorization under Part 810 involved sensitive nuclear technology (SNT), the proposed legislation (unlike current law) would not require full-scope safeguards as a condition of supply. However, the proposed agreement for peaceful nuclear cooperation will not provide for exports of SNT; the agreement would have to be amended (and the amendment submitted to Congress for review) to allow for such exports. Depending on the final wording of the new legislation, DOE might have to consider whether amendments to its regulations would be required.

The Department of Energy, the Nuclear Regulatory Commission, and the Department of Commerce would conduct a thorough review of their regulations to determine whether any changes would be required if the proposed legislation became law.

Question (22)(a). Secretary Rice, in November 2005, U/S Joseph stated that "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."

What additional steps toward implementation has the Government of India taken since tabling its Separation Plan; and, . . .

Answer. Since India's separation plan was tabled in the Indian Parliament on March 7, 2006, the Indian Government has begun its implementation. During the week of April 3, the chairman of India's Atomic Energy Commission, Dr. Anil Kakodkar, traveled to Vienna to begin informal discussions with the International Atomic Energy Agency (IAEA) on India's safeguards agreement. While there, Dr. Kakodkar met with IAEA Director General Dr. Mohamed ElBaradei. In addition, we fully expect that India in the near future will both provide the IAEA with a detailed list of all civil facilities, along with anticipated timelines for the application of safeguards to those facilities, and conduct extensive safeguards negotiations with the IAEA.

Question (22)(b). Secretary Rice, in November 2005, U/S Joseph stated that "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."

What additional steps in respect of the Separation Plan need to be taken by India before its Separation Plan can be considered to be in force?

Answer. To fully implement the separation plan, the Indian government will identify specific reactors to be offered for safeguards and provide a timeline for doing so. In addition, India will identify which upstream and downstream nuclear facilities it will declare to the IAEA as civil and offer for IAEA safeguards. Once the separation and declaration are complete, India must conclude and bring into force a safeguards agreement with the IAEA, as well as sign and adhere to an Additional Protocol.

Question (23). Secretary Rice, administration officials have stated that it would be "ideal" to have U.S. law adjusted before the Nuclear Suppliers Group Guidelines are changed. Why, in your view, is it "ideal" to have U.S. law change before NSG Guidelines are changed?

Answer. For those countries that do not have domestic laws preventing nuclear commerce with India, the NSG Guidelines may constitute the only restrictions on the transfer of nuclear material and technology to that country. Enterprises engaged in various aspects of the nuclear industry in those countries would most likely be free to engage in nuclear commerce as soon as the NSG adopted a resolution allowing civil nuclear cooperation with India. If the NSG were to adopt such a resolution before the proposed U.S. legislation is enacted, U.S. businesses could be at a competitive disadvantage. Additionally, some NSG partners have indicated that they are looking to the U.S. for leadership on this issue and are not prepared to act before Congress indicates its intent.

Question (24). Could you please furnish the committee with an analysis of the extant laws of the Russian Federation, France and China that are comparable in respect of nuclear export controls, in particular whether such laws contain a requirement for full-scope safeguards similar to the U.S. requirement at section 123.a(2) of the AEA?

Answer. As Participating Governments of the Nuclear Suppliers Group (NSG), Russia, France, and China have each undertaken a political commitment that its national laws and regulations would be at least as stringent as the standards set forth in the NSG Guidelines and control lists. This includes the requirement for full-scope safeguards as a condition of supply to non-nuclear weapon states (as all states other than the NPT-defined nuclear weapon states are treated in this context). We have not compiled the laws of all NSG participants to determine how they satisfy this undertaking.Q04

ASSURANCES OF SUPPLY

Question (1). Secretary Rice, other than the United States, who would be the principal nations that are capable of selling India nuclear fuel, nuclear materials and reactor technology?

Answer. The world's largest producers of uranium (outside the United States) are, in order, Canada, Australia, Kazakhstan, Russia, Namibia, Niger, Uzbekistan, Ukraine, and South Africa. All export uranium.

China, France, Germany, the Netherlands, Russia, and the UK are all capable of supplying uranium enrichment services. Japan also has significant uranium enrichment capability that it uses for its domestic market.

Belgium, Canada, France, Germany, Kazakhstan, Russia, Spain, Sweden, and the UK are the principal nuclear fuel exporters. Argentina, Brazil, Japan, and the Republic of Korea have significant nuclear fuel manufacturing capability that they use for their domestic markets.

France, Germany (in partnership with France), Canada, Russia, and China are all capable of supplying nuclear reactors. Japan and the Republic of Korea have significant reactor/component manufacturing capability, but have not yet supplied complete reactor systems, only reactor components. The Czech Republic also has a significant reactor/component manufacturing capability.

Any or all of the above countries could be major suppliers of nuclear material and equipment to India. Numerous other countries have limited supply capabilities. However, each would need to make its own national decision about whether supply to India would be consistent with domestic and international obligations.

Question (2). Has the United States obtained for India assurances of fuel supply from other supplier nations?—If so, which?

Answer. The United States has not yet discussed fuel supply assurances for India's civil nuclear reactors with any third country. We believe that it is premature

to do so at this time. Timely and effective Indian safeguards and Additional Protocol negotiations with the IAEA are important next steps.

Question (3). Have all potential nuclear suppliers to India agreed to terminate the supply of fuel or reactors and related sensitive technology to India if it detonates a nuclear explosive device?

Answer. Our interlocutors in the NSG have made it clear that their support for accommodating civil nuclear cooperation with India hinges upon India's successful implementation of its commitments in the July 2005 Joint Statement, including India's commitment to continue its moratorium on nuclear testing. We do not have the official views of potential nuclear suppliers regarding a termination of transfers of nuclear material, including fuel and technology, to India should India detonate a nuclear explosive device. However, we expect that there would be irresistible political pressure for NSG participants to terminate any transfers of nuclear material and technology to India should India detonate a nuclear explosive device.

Moreover, there is a provision in the NSG Guidelines calling for suppliers to meet and consult if a supplier believes there has been a violation of the supplier/recipient understandings resulting from the Guidelines, particularly in the event of, among other things, an explosion of a nuclear device. India's 1998 nuclear tests prompted the NSG to meet in an extraordinary plenary for such consultations. The Guidelines further reference the possibility of a common response, which could include the termination of nuclear transfers.

We have made it clear to the Government of India that the Civil Nuclear Cooperation Initiative relies on India's commitment to continue its unilateral nuclear testing moratorium. This gives India clear economic and energy incentives not to test.

INDIA'S SAFEGUARDS AGREEMENT

Question (1). Secretary Rice, in November of last year, U/S Joseph stated that

> *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.*

Please clarify, with regard to INFCIRC/66 (presumably /Rev. 2), where in that document does the requirement appear that once a facility is declared it must remain declared and under inspection in perpetuity?

Answer. Unlike INFCIRC/153, the model safeguards agreement for non-nuclear weapon states under the NPT, INFCIRC/66/Rev.2 is not a model safeguards agreement. Rather, it is a general description of how safeguards are to apply to nuclear material and facilities under the IAEA safeguards system that predates the NPT. Therefore it does not contain every provision that may be included in a safeguards agreement. In particular, the scope and duration of safeguards are normally spelled out in the safeguards agreement.

The principle that safeguards should be applied in perpetuity in INFCIRC/66/Rev. 2 safeguards agreements was embodied in a Memorandum from the IAEA Director General to the IAEA Board of Governors in 1973 (IAEA GOV/1621). We expect any safeguards agreement India negotiates with the IAEA to be consistent with its pledge to place its civil nuclear facilities under safeguards in perpetuity. As Secretary Rice testified before the SFRC, "We've been very clear with the Indians that the permanence of the safeguard is permanence of the safeguards without condition."

Question (2). With regard to India's indigenous reactors that are not submitted to safeguards as a result of a project agreement, but rather voluntarily submitted, is there a requirement in INFCIRC/66 that safeguards must be applied in perpetuity to such reactors?

Answer. As noted above, the scope and duration of safeguards are not set for the INFCIRC/66, but rather are normally spelled out in the safeguards agreements. In its separation plan, India has committed to safeguards in perpetuity. As Secretary Rice testified before the SFRC, "We've been very clear with the Indians that the permanence of the safeguard is permanence of the safeguards without condition."

Question (3). What, in your view, does India mean when in its Separation Plan it states that the safeguards agreement will provide for "corrective measures that India may take to ensure uninterrupted operation of its civilian reactors in the event of disruption of foreign fuel supplies"?

Answer. We cannot speak for the Government of India, of course; India will need to clarify its intent in this respect in its discussions with the IAEA. India has agreed to safeguards in perpetuity on its declared civil facilities and on all future civil reactors. Safeguards in perpetuity would also apply to nuclear material used or produced in those facilities. Thus, safeguards would continue to be required in a campaign mode on downstream facilities processing safeguarded material from declared civil facilities.

We have had only initial, conceptual discussions with India regarding the question of assured fuel supplies. We believe that India can be provided with the assurances it seeks for fuel supply consistent with safeguards in perpetuity.

Question (4). Would India be under any obligation, if it concluded an agreement with the IAEA using the INFCIRC/66 model, to keep safeguards on its eight indigenously built civil PHWRs in perpetuity?

Answer. India has committed to place its civil nuclear facilities, including its eight indigenously built civil PHWRs, under safeguards in perpetuity.

Question (5). Would India's safeguards obligation apply only to foreign fuel supplied to its indigenously built PHWRs?

Answer. India has committed to place its civil nuclear facilities under safeguards in perpetuity. Safeguards would apply to any fuel, indigenous or foreign, that is in a civil reactor at the point that safeguards go into effect for that facility.

In addition to India's unilateral safeguards commitment, any foreign-supplied fuel would be subject to safeguards by virtue of the supply arrangement for that material. Supplier states will require safeguards in perpetuity with respect to supplied items in order to satisfy the requirements of NPT Article III.2.

Question (6). If India stopped using foreign fuel in those reactors, would its envisioned safeguards, as outlined in its implementation document, impose an obligation to continue to apply safeguards on the reactors themselves?

Answer. For the reasons described in answers above, safeguards would continue to be required on all declared civil nuclear facilities and on all nuclear material produced, processed, or used in those facilities.

Question (7). Generally, how are safeguards terminated under the provisions of INFCIRC/66/Rev.2?

Answer. With respect to facilities and equipment covered by a safeguards agreement, in general it is the safeguards agreement, not INFCIRC/66, which specifies whether and how safeguards may be terminated. As noted above, INFCIRC/66 is not a model safeguards agreement, and its provisions apply to the extent they are incorporated into a particular safeguards agreement. The provisions for termination of safeguards on nuclear material are set forth in paragraphs 26–28 of INFCIRC/66/Rev.2. These provisions allow for safeguards to be terminated on material that is exported, consumed, diluted so that it is no longer usable, or practicably irrecoverable. These conditions are essentially the same as under a comprehensive safeguards agreement based on INFCIRC/153.

INFCIRC/66 also has some conditions that are unique to cases where the state is not subject to comprehensive safeguards. In particular, it allows for placing under safeguards as a substitute material of at least the same quality and quantity that was not previously under safeguards, and for the termination of safeguards on the previously safeguarded material, if the IAEA agrees to such substitution. It also al-

lows the withdrawal of material that was subject to safeguards only because it was used in a safeguarded nuclear facility; however, this does not apply to material that was produced while under safeguards.

Question (8). What, in your view, are the most important provisions that any Indian safeguards agreement and additional protocol with the IAEA must contain?

Answer. India's safeguards agreement with the IAEA must require that safeguards be maintained with respect to all nuclear material and equipment supplied to India and any special nuclear material used in or produced through the use of such material and equipment. Further, it must satisfy India's commitment to place its civil nuclear facilities under IAEA safeguards in perpetuity. These provisions are essential to provide a strong assurance to the United States and its NSG partners that nuclear cooperation with India will not "in any way" assist India's nuclear weapons program and will not be improperly diverted to third parties.

Since India will have a military nuclear program that it does not declare to the IAEA, its Additional Protocol would differ from the Model Additional Protocol. Nevertheless, this Protocol should advance the IAEA's ability to track potential nuclear proliferation worldwide. In that regard, reporting of exports listed in Annex II of the Model Additional Protocol would arguably be of greatest value. India has pledged to conclude an Additional Protocol with respect to its civil facilities, and the Model Additional Protocol has provisions that deal with the "sites" of nuclear facilities. India has also listed as civil a number of research and development and other facilities that would not normally be subject to safeguards, but could be subject to the reporting and access provisions of an Additional Protocol.

Question (9). What would be the frequency of inspections conducted in India by the IAEA under a safeguards agreement and additional protocol?

Answer. A safeguards agreement usually does not specify the frequency of inspections, but rather sets limits on the number of routine inspections. The frequency of inspections at a particular facility is usually agreed in a separate "facility attachment." We expect the implementation of safeguards in India would be generally consistent with the implementation of safeguards on similar facilities in other countries.

INDIA'S FUEL CYCLE

Question (1)(a). Secretary Rice, last November, U/S Burns stated that,

> *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.*

Has India decided to end, or expressed a desire to end, its pursuit of a three-stage fuel cycle?

Answer. Only the Government of India can provide a definitive answer to the question of whether it has decided to end its pursuit of a three-stage fuel cycle. Although the concept was mentioned in India's separation plan, it has had less prominence in our discussions of civil nuclear cooperation.

Question (1)(b). Secretary Rice, last November, U/S Burns stated that,

> *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.*

What are the "proliferation risks" posed by India's intended fuel cycle, in particular its breeder reactors?

Answer. The use of thorium requires a complex fuel cycle, although its use as reactor fuel may produce less fissile material as a byproduct than does the use of uranium as a fuel.

To be useful as reactor fuel, thorium must be converted into U–233 in a breeder reactor. The fuel cycle requires considerable handling of fissile material in the various loading, unloading, and transfers associated with the stages of the fuel cycle. Each time fissile material is handled, there is a risk of diversion.

Question (1)(c). Secretary Rice, last November, U/S Burns stated that,

> *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.*

What are the proliferation risks associated with breeder reactor technology, generally?

Answer. Unlike a typical commercial reactor, a breeder reactor creates more usable fuel (i.e., plutonium) than it uses. The production of plutonium and other fuels as a byproduct of the reactor's operation adds to the world net stock of potential fuel for a nuclear explosive device.

HEAVY WATER EXPORTS/PRODUCTION

Question (1). Secretary Rice, in November of last year, I asked U/S Joseph if creating in law a distinction between India and NPT parties that would provide different treatment in terms of authorized exports for non-NPT parties—i.e., that India would be eligible for most U.S. exports except equipment, materials, or technology related to enrichment, reprocessing, and heavy water production—would be acceptable to the administration. Secretary Joseph stated that "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."

Last March, while on a visit to India, Commissioner Peter Lyons of the NRC is quoted as having stated that "[The NRC] and [the Indian Atomic Energy Research Board] will have greater cooperation in the near future and this is important in the global market place reality and also when the U.S. nuclear industry is exploring the options other than Light Water Reactors (LWRs)."[4]

Has the administration determined whether or not heavy water could be exported to India from the United States?

Answer. The U.S. does not foresee transferring heavy water production equipment or technology to India, and the draft bilateral peaceful nuclear cooperation agreement accordingly makes no provisions for such transfers.

Question (2). Does the administration contemplate allowing India full participation in its Global Nuclear Energy Program (GNEP)?

Answer. U.S. negotiators told India that India's decision not to designate its fast breeder reactors and associated fuel cycle research and development facilities as civil and place those facilities under IAEA safeguards would preclude our ability to collaborate on issues related to the fast burner reactors contemplated under GNEP at this time. If India places breeder reactors under safeguards in the future, the United States has indicated that, as appropriate, it is willing to explore potential areas for civil cooperation in this context.

Question (3). Does the administration contemplate authorizing the export to India from the United States of reactors other than LWRs' if so, of which type?

Answer. The United States has no current plans to export any power reactors other than LWRs to any country.

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[4] "USNRC for Greater Cooperation with AERB," The Press Trust of India, March 27, 2006.

THE NUCLEAR COOPERATIVE AGREEMENT

Question (1)(a)/(b). Secretary Rice, U/S Joseph previously stated that, regarding the Peaceful Nuclear Cooperative Agreement (PNCA) with India, it will not provide for full-scope safeguards, but rather "will allow for appropriate controls to help ensure that material or goods provided for civilian purposes remain within the civilian sector."

(a) Has the administration prepared a draft text of a PNCA with India?

(b) If so, could you furnish this committee with a copy?

Answer. The administration has prepared a draft text of a proposed U.S.–India agreement for peaceful nuclear cooperation. It was conveyed to the Government of India by the American Embassy in New Delhi on March 16, 2006.

We have begun initial discussions with India on a bilateral agreement for peaceful nuclear cooperation. We have already briefed staff in detail on that agreement, and would be happy to arrange additional briefings for the committee on the outlines of what is contained in the text. Texts of the Section 123 agreements with non-nuclear weapon states that are currently in force and previously reviewed by Congress are illustrative of the content we are seeking in an agreement with India (with the exception of a provision for full-scope IAEA safeguards in India). Congress will have an opportunity to fully review the agreement once negotiations are complete and the agreement has been submitted for congressional review.

Question (1)(c)/(d). Secretary Rice, U/S Joseph previously stated that, regarding the Peaceful Nuclear Cooperative Agreement (PNCA) with India, it will not provide for full-scope safeguards, but rather "will allow for appropriate controls to help ensure that material or goods provided for civilian purposes remain within the civilian sector."

(c) Will the State Department prepare or issue a Circular 175 pursuant to 11 FAM 720 for a PNCA with India?

(d) If so, could you furnish a copy of either the draft or final Circular 175 to this committee?

Answer. The Department of State prepared a Circular 175 memorandum requesting authority to negotiate an Atomic Energy Act Section 123 agreement with India and obtained the concurrence of other interested Executive Branch agencies and the Nuclear Regulatory Commission. Under Secretary of State Joseph, under authority delegated by the Secretary of State, approved the request for authority to negotiate on March 13, 2006.

We would be happy to brief the committee or its staff on the matters addressed in the Circular 175 process, which relate directly to our current negotiations with India.

Question (1)(e). Secretary Rice, U/S Joseph previously stated that, regarding the Peaceful Nuclear Cooperative Agreement (PNCA) with India, it will not provide for full-scope safeguards, but rather "will allow for appropriate controls to help ensure that material or goods provided for civilian purposes remain within the civilian sector."

What verification mechanisms would be included in the U.S.–India nuclear cooperative agreement?—For example, would the United States be able to conduct any special verification visits at Indian facilities to which US materials and technology had been exported?

Answer. The administration is seeking an agreement for peaceful nuclear cooperation with India that will provide for IAEA safeguards on all source or special nuclear material transferred by the United States to India and on any source or special nuclear material used in or produced through the use of material, equipment, or components so transferred. This provision will implement Section 123(a)(1) of the Atomic Energy Act (AEA) with respect to the content of the agreement and Section 127(1) of the AEA with respect to U.S. exports pursuant to the agreement. It is also necessary if U.S. nuclear exports to India are to comply with U.S. obligations under the NPT.

In addition, in accordance with normal practice, the administration is seeking a provision in the agreement for "fall-back" safeguards (i.e., direct verification by the United States of material, equipment and components subject to the agreement) if for any reason IAEA safeguards are not being applied to those items as provided in the agreement. This is necessary to satisfy the requirement in Section 123(a)(1) of the AEA that the safeguards provided for in the agreement will be maintained "so long as the material or equipment remains under the jurisdiction or control of

the cooperating party, irrespective of the duration of other provisions of the agreement" (such as the provision for IAEA safeguards).

In general, the United States (like other NSG participants) relies upon IAEA inspections and monitoring. However, the United States would in fact be able to conduct "special verification visits" in the form of fall-back safeguards as required by the U.S.-India agreement for peaceful nuclear cooperation in the event that IAEA safeguards were not being applied.

IAEA PROCESS

Question (1). Secretary Rice, has India submitted a declaration to the IAEA of its civilian nuclear sites, facilities, locations and materials?

Answer. India has not yet submitted such a declaration to the IAEA. We fully expect that India in the near future will provide the IAEA with a detailed list of all civil facilities, along with anticipated timelines for the application of safeguards to those facilities.

Question (2). Secretary Rice, how long do you anticipate that it will take for India to negotiate a declaration of civilian nuclear facilities, locations, information and materials, and its associated safeguards agreement and additional protocol, with the IAEA?

Answer. We have encouraged India to conclude its safeguards agreement with the IAEA as soon as possible. India will submit its unilateral declaration of its civil facilities and programs as part of that process. India has conducted initial, informal safeguards discussions with the IAEA, but neither party has yet publicized a specific negotiation timeline. In our view, an "India-specific" safeguards agreement should generally conform with INFCIRC/66. Rev. 2. If it does so, we see no fundamental obstacle to concluding such an agreement in a reasonable timeframe.

India's Additional Protocol will be appropriate to its safeguards agreement. In principle, the safeguards agreement and the Additional Protocol could be negotiated in parallel. However, in the interest of concluding the safeguards agreement as soon as possible, India may seek to defer negotiation of an Additional Protocol until negotiations on the safeguards agreement are complete.

Question (3). Secretary Rice, what are the steps with regard to both IAEA process and Indian law through which an Indian safeguards agreement and additional protocol with the IAEA would need to pass before they would be in force, and which of those steps have been completed?

Answer. For both the safeguards agreement and the Additional Protocol, the process involves the following steps:

1. India and the IAEA Secretariat negotiate the agreement and/or protocol.

2. The IAEA Secretariat presents the agreement and/or protocol to the IAEA Board of Governors for approval. The United States has a designated seat on the 35-member Board, which normally decides such matters by consensus.

3. Once the Board approves, India and the IAEA may sign the agreement and/or protocol.

4. India must then complete its statutory and constitutional requirements for ratification or approval of the agreement and/or protocol. The agreement and/or protocol enters into force once India informs the IAEA that these requirements for entry into force have been met.

To date, India has conducted initial, informal consultations with the IAEA, but none of the steps listed above has yet been completed.

Question (4). Secretary Rice, would India's existing agreements with the IAEA (INFCIRC/211, INFCIRC 260, INFCIRC/360, INFCIRC/374, and INFCIRC /433) need to be changed or withdrawn when an Indian declaration, safeguards agreement and additional protocol are negotiated?

Answer. There is no legal requirement to modify any of India's existing safeguards agreements in order for a new safeguards agreement and Additional Protocol to be negotiated and enter into force. However, it is not uncommon for one safeguards agreement to be suspended when another agreement of broader scope enters into force. In principle, the pre-existing safeguards agreement would in such a case not

be terminated, but its implementation would be suspended as long as the new safeguards agreement is in force.

It is up to India and the IAEA whether, consistent with their international obligations, to seek to suspend other safeguards agreements in favor of a new, more comprehensive one. There may be advantages to having safeguards applied under the terms of a single agreement, particularly in terms of administrative simplicity. However, many of India's existing safeguards agreements are safeguards transfer agreements. These are agreements between India and the IAEA that are linked to supply arrangements between various supplier states. They provide for the IAEA to apply safeguards with respect to a particular supply arrangement. In general, the consent of the supplier state would be required in order for any such agreement to be suspended.

RECENT SANCTIONS

Note: Accompanying these QFRs is an unclassified report compiled by the Department of Commerce's Bureau of Industrial Security (DOC/BIS). The answers to the QFRs below do not include information regarding ongoing, open investigations due to the sensitivity of such investigations.

Question (1)(a). Secretary Rice, on March 9, 2006, the Department of Commerce sanctioned two Indian persons for transactions with North Korea.[5] Please provide this committee, in classified form if necessary but in open form if possible, with an interagency-coordinated list regarding the following:

With respect to the Arms Export Control Act, the Export Administration Act, the International Emergency Economic Powers Act, and related legislation governing imports, exports or improper financial transactions—

> any criminal investigation involving India or any Indian entity or other person, including any Indian national, since May 1998, and whether each such investigation is open or closed and, if closed, the disposition; and

Answer. Information on investigations by the Customs Department, due to the sensitivity of the information, will be provided separately.

DOC/BIS's Investigative Management System (IMS) indicates that during the period February 2003 to present, BIS opened 63 cases involving possible Export Administration Regulations (EAR) violations by U.S. firms violating U.S. laws, with India as the ultimate consignee of the exported items. There are currently 33 open cases in IMS with India listed as the ultimate consignee.

NOTE: IMS was activated in February 2003. Although prior automated investigative files were migrated to IMS, data in these prior files cannot be queried electronically; thus, BIS cannot reliably report on case statistics prior to February 2003. The current review covers investigations input into IMS since February 2003 identified as involving possible illegal exports to India in violation of the EAR.

Regarding closed criminal cases:

- Materials International—On November 18, 2005, Fiber Materials Inc. of Maine; its wholly owned subsidiary, Materials International of Massachusetts; and the companies' two top officers, Walter Lachman and Maurice Subilia, were sentenced for conspiracy and export violations related to the unlicensed export to India of equipment used to manufacture carbon-carbon components with applications in ballistic missiles. All four defendants had been convicted of one count of violating the Export Administration Act (EAA) and one count of conspiracy by a federal trial jury on March 31, 1995. The equipment, a specially designed control panel for operation of a hot isostatic press used to produce carbon-carbon items, was exported to India's Defense Research Development Laboratory (DRDL), the defense laboratory developing India's principal nuclear-capable ballistic missile, the Agni. Lachman was sentenced to three years probation, the first year of which is to be spent in home detention. Subilia was sentenced to three years probation, the first six months of which was to be spent in community confinement to be followed by one year of home detention. A criminal fine of $250,000 was imposed on Lachman, Subilia, and Fiber Materials; no fine was imposed on Materials International because it is a wholly-owned subsidiary of Fiber Materials. OEE and Immigration and Customs Enforcement (ICE) jointly conducted this investigation.
- Berkeley Nucleonics—On June 6, 2004, BNC Corp. of San Rafael, California (previously Berkeley Nucleonics Corporation) was sentenced to five years probation and a $300,000 criminal fine for illegally exporting pulse generators to two

[5] 71 FR 12168 and 12170.

entities in India without required export licenses. The end-users were listed on BIS's entity list for nuclear nonproliferation reasons. Two former employees of BNC, Richard Hamilton and Vincent Delfino, were convicted in December 2003, for their role in these exports. Each was sentenced to two years probation, a $1,000 fine, and 100 hours of community service, and was prohibited from engaging in or facilitating export transactions. BIS assessed BNC a $55,000 administrative penalty and a five-year suspended denial of export privileges as part of an agreement with BNC to settle charges related to these unlicensed exports.

- DirecTV/Hughes Network Systems—in 2005, DirecTV/Hughes Network Systems entered into a consent agreement with the Department of State to settle alleged violations of the International Trafficking in Arms Regulations related to the unauthorized export of U.S. Military List hardware and services to end users in a number of countries, including India.
- Multigen Paradigm—in 2003, Multigen Paradigm entered into a consent agreement with the Department of State to settle alleged violations of the International Trafficking in Arms Regulations related to unauthorized exports to a number of countries, including India.

Question (1)(b). Secretary Rice, on March 9, 2006, the Department of Commerce sanctioned two Indian persons for transactions with North Korea.[6] Please provide this committee, in classified form if necessary but in open form if possible, with an interagency-coordinated list regarding the following:

With respect to the Arms Export Control Act, the Export Administration Act, the International Emergency Economic Powers Act, and related legislation governing imports, exports or improper financial transactions—

any civil or administration investigation involving India or any Indian entity or other person, including any Indian national, since May 1998, and whether each such investigation is open or closed and, if closed, the disposition; and

Answer. Information on investigations by the Customs Department, due to the sensitivity of the information, will be provided separately.

The following are administrative investigations conducted by DOC/BIS since February 2003 identified as involving possible illegal exports to India in violation of the EAR. (NOTE: As noted above, Commerce could only report on case statistics prior to February 2003.)

- State Bank of India—In 2003, the Department of the Treasury's Office of Foreign Assets Control imposed a civil penalty in the amount of $5,500 on the State Bank of India, New York for a funds transfer made in violation of Executive Order 13121 of April 30, 1999. E.O. 13121, issued pursuant to IEEPA, imposed sanctions on the Federal Republic of Yugoslavia as a result of the humanitarian crisis in Kosovo.
- Orcas International—On March 2, 2006, Assistant Secretary Darryl Jackson signed four Final Orders in connection with the attempted un-licensed export of toxins (Aflatoxin and Staphlyloccocal Enterotoxins) classified as ECCN 1C351, to end-users in North Korea. Orcas International, of Flanders New Jersey agreed to pay an administrative penalty of $19,800 and have its export privileges denied for four years. Mr. Graneshawar K. Rao, President of Orcas International, will have his export privileges denied for four years. Dolphin International of New Delhi, India, agreed to pay a $22,000 administrative penalty and have its export privileges denied for four years. Vishwanath Kakade Rao, president of Dolphin International, agreed to have his export privileges denied for four years.
- Becton Dickinson—On December 28, 2005, Assistant Secretary Jackson signed a Final Order against Becton, Dickinson, & Co., of Franklin Lakes, New Jersey. Becton, Dickinson & Co was ordered to pay a $123,000 administrative penalty, and was subjected to an audit requirement. Becton, Dickinson, & Co., and their Singapore subsidiary, committed a total of thirty-six violations of the Export Administration Regulations (EAR) by exporting various life sciences research products to listed entities from the Indian Department of Atomic Energy and Indian Department of Defense.
- Teledyne Technology—On April 15, 2005, Teledyne Energy Systems Inc. (TES), Hunt Valley, Maryland, agreed to pay a $16,500 administrative penalty. On three occasions in 1999 and 2000, TES exported technical information on pro-

[6] 71 FR 12168 and 12170.

posed power plants, items subject to the EAR, from the United States to Bharat Heavy Electricals Ltd (BHEL) in New Delhi, India, without the required Commerce Department export licenses. At the time of the export, BHEL was listed on BIS's Entity List, which is a compilation of end-users who have been determined to present an unacceptable risk of diversion to programs for the development of weapons of mass destruction or their means of delivery. TES voluntarily self-disclosed the violations and cooperated fully in the investigation.

- Yarde Metals—On April 12, 2005 Yarde Metals (Yarde) of Happauge, New York, was ordered to pay a $10,000 administrative penalty in connection with the unlicensed export of an aluminum heat treatable plate to an organization in India on Commerce's Entity List. On or about May 5, 2003, Yarde engaged in conduct prohibited by the EAR when it exported an aluminum plate from the United States to the Vikram Sarabhai Space Center.
- Air Tiger Express)On March 30, 2005, Air Tiger Express, a freight forwarder located in El Segundo, California, agreed to pay a $49,500 administrative penalty to settle charges that on nine occasions in 1998 and 1999, it aided and abetted the unlicensed export of items subject to the EAR to organizations in India that were on the Department's Entity List.
- Datum Inc.—On October 28, 2004, Symmetricom, Inc. of San Jose, California, as the successor to Datum, Inc. of Beverly, Massachusetts, agreed to pay a $35,500 administrative penalty to settle charges that Datum exported of a 10 MHz oscillator to the Government of India, Department of Atomic Energy, Directorate of Purchase and Stores in Mumbai, India.
- New Brunswick Scientific—On August 30, 2004, New Brunswick Scientific was ordered to pay a $51,000 administrative penalty for the export of lab equipment, software and a fermentor to an Entity List end-user, the Directorate of Purchase and Stores of the Indian Department of Atomic Energy.
- Chyron Corporation—On August 30, 2004, Chyron Corporation was ordered to pay a $15,300 administrative penalty for the export of an animation system to and Entity List end-user, the Space Application Center in Ahmedabad, India.
- The Sentry Company—On June 24, 2004, The Sentry Company was ordered to pay a $25,000 administrative penalty for the export of heat treating containers to an Entity List end-user, Bharat Dynamics Ltd. in Hydrabad, India.
- General Monitors—On June 14, 2004, General Monitors was ordered to pay a $40,000 administrative penalty for the export of gas and fire detection equipment to an Entity List end-user, Bharat Heavy Electrical Ltd. in Hyderabad, India.
- RLC Electronics—On April 14, 2004, RLC Electronics was ordered to pay a $30,000 administrative penalty for the export of power dividers and low pass filters to the Indian Space Research Organization, Telemetry, Tracking, and Command Network in Bangalore, India, and the export of position switches Sriharikota Space Center in Bangalore, India. Both of the organizations were on the Entity List.
- Atlas Copco—On March 10, 2004, Atlas Copco was ordered to pay a $13,000 administrative penalty for the export of o-rings and seals to an Entity List end-user, Bharat Heavy Electrical Ltd. in Hyderabad, India.
- Alicat Scientific—On March 4, 2004, Alicat Scientific was ordered to pay a $7,000 ($2,000 suspended) administrative penalty for the export of mass flow meters and power supplies to an Entity List end-user, the Department of Atomic Energy in Mumbai India.
- Massive International—On January 15, 2004, Massive International was ordered to pay a $13,000 administrative penalty for the attempted export of hydraulic stud tensioners to an Entity List end-user, Bharat Heavy Electrical Ltd. in Tiruchirapalli, India.
- Denton Vacuum—On January 30, 2004, Denton Vacuum LLC was ordered to pay a $7,000 administrative penalty for exporting a sputtering system to an Entity List end-user, the Solid State Physics Laboratory in New Delhi, India.
- Future Metals—On November 12, 2003, Future Metals of Fort Lauderdale, Florida, was ordered to pay a $180,000 administrative penalty for the export of aluminum sheets and stainless steel tubes to an Entity List end-user, Hindustan Aeronautics Ltd., Engine Division, and also for the export of aluminum bars to another Indian end-user.
- Astro-Med, Inc.—On September 26, 2003, the Commerce Department issued an order implementing the terms of a settlement agreement under which Astro-

Med, Inc. of Warwick, Rhode Island agreed to pay a $5,000 administrative penalty to settle charges that it attempted to export a Dash 10M data recorder to the Nuclear Power Corporation of India without the required Department of Commerce license. BIS charged that Astro-Med knew or had reason to know that the item to be exported would be used directly or indirectly in an unsafeguarded nuclear activity.

- DSV Samson Transport, Inc.—On July 17, 2003, DSV Samson Transport, Inc., a freight forwarding company based in New Jersey, pled guilty in the U.S. District Court for the District of Columbia, and was sentenced to pay a $250,000 criminal fine and serve five years corporate probation for violations of U.S. export laws. DSV Samson also agreed to pay a $399,000 administrative penalty to the Department of Commerce to settle the administrative case relating to these illegal exports. Between November 1999 and May 12, 2001, DSV Samson made 30 exports to organizations on the Entity List in India without the required Department of Commerce export licenses. Despite being informed by Special Agents from the Office of Export Enforcement on at least three occasions about the regulations controlling such shipments, DSV Samson forwarded these shipments and caused violations of Department of Commerce export controls designed to prevent nuclear proliferation.
- Quest Technologies—On April 26, 2001, Quest Technologies was ordered to pay a $225,000 administrative penalty ($135,000 suspended) for the illegal export of chlorine and sulfur detectors to India, Vietnam, Taiwan, Saudi Arabia, Egypt, and the United Arab Emirates.
- Detector Electronics Corporation—On November 8, 2001, BIS imposed a $15,000 administrative penalty on Detector Electronics Corporation of Minneapolis, Minnesota, to settle charges that the company exported U.S.-origin ultraviolet fire detection systems to Bharat Heavy Electrical Ltd. without the required BIS license. Bharat was a company in India that was identified on Commerce's Entity List. BIS alleged that Detector Electronics Corporation exported the fire detection systems to India on two occasions between November and December 1998.
- Optical Associates, Inc.—On September 20, 2000, Optical Associates, Inc., of Milpitas, California, pled guilty in the U.S. District Court in the Northern District of California to the charge that the company illegally exported a mask aligner and related parts, in violation of the EAR, to the State Bank of India with knowledge that the end-user would be Bhaba Atomic Research Center (BARC), a prohibited entity in India. The mask aligner is controlled for antiterrorism under the EAR. BARC is a division of the Department of Atomic Energy of the Government of India. Unlicensed exports to BARC have been prohibited since June 30, 1997.
- Coherent Inc.—On February 2, 1998, Coherent Inc. was ordered to pay a $20,000 administrative penalty for the export of plasma tubes for use in argon ion lasers to the Indian Department of Atomic Energy.

Question (2). Secretary Rice, on March 9, 2006, the Department of Commerce sanctioned two Indian persons for transactions with North Korea.[7] Please provide this committee, in classified form if necessary but in open form if possible, with an interagency-coordinated list regarding the following:

With respect to any U.S. law providing for the imposition of sanctions related to weapons of mass destruction, their means of delivery, or conventional weapons, a summary of any internal investigation, review or other examination undertaken by the Department of State or the President of any Indian entities or other persons, including any Indian national, whether the investigation, review or other examination is open or closed and, if closed, the disposition of each such investigation, review or examination.

Answer. We take seriously all reports of potential proliferation activities and take appropriate action, including imposing sanctions required or authorized under U.S. law, when evidence warrants. For example, the Iran and Syria Nonproliferation Act (ISNA), formerly the Iran Nonproliferation Act of 2000 (INPA), requires a bi-annual review of information for possible sanctions actions and is a rolling process. Other sanctions pursuant to U.S. legal authorities are considered whenever evidence meets the legal criteria.

Since May 1998, the U.S. has imposed nonproliferation sanctions on a number of different Indian entities pursuant to U.S. legal authorities.

[7] 71 FR 12168 and 12170.

Owing to the nature of the information used for making sanctions determinations and ongoing diplomatic exchanges with the Government of India, further details of these particular sanctions cases would need to be provided in a classified setting. We would be happy to brief the committee as appropriate.

- In July 2002, the U.S. imposed sanctions on the Indian entity Hans Raj Shiv pursuant to the Iran-Iraq Nonproliferation Act for the transfer to Iraq of equipment and technology controlled by the Australia Group. The U.S. also sanctioned Shiv pursuant to the Chemical and Biological Weapons Control and Warfare Elimination Act in February 2003.
- In February 2003, the U.S. imposed sanctions on the Indian entity NEC Engineers Pvt. Ltd. pursuant to Chemical and Biological Weapons Control and Warfare Elimination Act.
- In February 2003, the U.S. imposed sanctions on the Indian entity Protech Consultants, Pvt. Ltd. pursuant to the Iran-Iraq Arms Nonproliferation Act for the transfer to Iraq of equipment and technology controlled by the Australia Group.
- Pursuant to the Iran Nonproliferation Act of 2000 (INPA), the U.S. has imposed sanctions four times on Indian entities. In September 2004, the U.S. imposed INPA penalties on Dr. C. Surendar and Dr. Y.S.R. Prasad; penalties on Dr. Surendar were rescinded in December 2005. Also in December 2005, the U.S. imposed INPA penalties on the Indian entities Sabero Organic Chemicals Gujarat Ltd. and Sandhya Organic Chemicals Pvt. Ltd.

India's new Weapons of Mass Destruction (WMD) and their Delivery Systems (Prohibitions of Unlawful Activities) Act, enacted in May 2005, with its stronger "catch-all" provisions, strengthens considerably the government's regulatory ability to control transfers of otherwise uncontrolled items that could contribute to a WMD or missile program of concern.

INDIA'S EXPORT CONTROL LAW

Question (1). Secretary Rice, in November of last year, U/S Joseph stated with regard to India's new export control law (Weapons of Mass Destruction and Their Delivery Systems (Prohibition of Unlawful Activities) Act, adopted in 2005), that "Department of State and Commerce lawyers and export control experts have reviewed" that law but that "no consolidated analytical document representing an interagency assessment of India's export control law and regulations" was available. Additionally, I asked whether the Department would furnish questions it had sent to the Indian Government concerning that law to this committee, and was informed that "[g]iven the sensitivities of the diplomatic communications involved, we cannot provide the information for the record."

Could you please provide me in classified form the questions the Department asked the Indian Government regarding its WMD law?

Answer. We would be happy to provide a classified briefing to the committee on the questions raised with the Indian government regarding its WMD law.

Question (2). Please provide this committee with a consolidated analytical document representing an interagency assessment of India's export control laws and regulations.

Answer. No such consolidated analytical document representing an interagency assessment of Indian export controls and regulations currently exists. We would be happy to brief the committee on India's export control laws and regulations.

Question (3). Secretary Rice, on March 10, 2006, the Washington, DC-based Institute for Science and International Security (ISIS) released a report which concluded that India has "a well-developed, active, and secret Indian program to outfit its uranium enrichment program and circumvent other countries' export control efforts" and that "Indian procurement methods for its nuclear program leak sensitive nuclear technology."[8]

In classified form if necessary, but in open form if possible, please provide me with the Department's assessment of the allegations raised in the ISIS report on Indian procurement, particularly with regard to the alleged instances of illegal acquisition of equipment, diversion of such equipment from stated end uses and/or end users, and any risk of onward proliferation arising out of such activities.

[8] Available at http://www.isis-online.org/publications/southasia/indianprocurement.pdf.

Answer. We would be happy to discuss these allegations in classified session.

Question (4). How would the requirements of relevant U.S. licenses assure that any U.S. exports to Indian companies and trading agents that are alleged to have promulgated or purchased sensitive tender documents relating to uranium enrichment or other sensitive parts of the nuclear fuel cycle do not transfer the know-how or items exported from the United States to India to other companies or countries?

Answer. To clarify the scope of the question, the "sensitive parts of the nuclear fuel cycle" will not be included in U.S.-India civil nuclear cooperation. Our draft agreement for peaceful nuclear cooperation provides that "sensitive nuclear technology" may not be transferred without an amendment to the agreement, which would be subject to congressional review.

India's safeguards agreement and Additional Protocol with the IAEA will provide the IAEA with access to Indian facilities and programs, including documentation, which will provide assurances against internal diversion and re-transfer of controlled technology.

The details of licensing requirements are within the purview of the licensing agencies, generally the Department of Commerce, the Department of Energy, and the Nuclear Regulatory Commission.

For dual-use nuclear exports administered by the Department of Commerce, there are several ways the U.S. is assured that exports are going to reliable recipients of U.S. origin items and have not been diverted to unauthorized end user or end uses. As part of the license application package we require nuclear certification that the item(s) will not be used in any of the prohibited activities described in ◀744.2(a) of the EAR. Through the licensing process, the intelligence and enforcement communities provide information on the bona fides of prospective end-users. Commerce determines the bona fides of the transaction and suitability of the end-user through the use of pre-license checks. This information is then used to make licensing decisions. As part of the approval process, export license normally have conditions attached that prohibit reexport, retransfer, or use in sensitive nuclear, chemical, biological, or missile end uses. We require applicants to inform end-users of the licensing conditions. In addition, the U.S. has an end use assurance letter from the Government of India that commits to ensure that items are not transferred from or through India for use in prohibited unsafeguarded nuclear, WMD, or WMD delivery programs. Also through post-shipment verifications, the U.S. visits recipients of U.S.-origin items to ensure that the items have actually been delivered to the authorized ultimate consignee or end-user and those items are being used as stated on the export license application.

The transfer of uranium enrichment or other nuclear fuel technology requires authorization by the Secretary of Energy under Section 57(b) of the Atomic Energy Act of 1954. The regulations that implement Section 57(b) are found in 10 CFR Part 810 which requires that, prior to such approval, government-to-government assurances outlining the controls/conditions that will be used for securing this technology must be in place. This includes the requirement that the transfer, anything derived from the transfer, and anything that is produced or modified in a facility constructed as a result of the transfer will be used for peaceful purposes. Further, the United States places additional conditions on the authorization to transfer the technology that limits access and prohibits the retransfer of the technology.

INDIA'S STATUS

Question (1). Secretary Rice, the July 2005 Joint Statement terms India "a responsible state with advanced nuclear technology."[9]

For the purposes of U.S. compliance with the NPT, and under relevant U.S. laws making reference to a non-nuclear weapon state or states, does India remain a non-nuclear weapon state?

Answer. While India has nuclear weapons and we must deal with this fact in a realistic, pragmatic manner, we do not recognize India as a nuclear weapon state or seek to legitimize India's nuclear weapons program.

The 1968 Treaty on the Non-Proliferation of Nuclear Weapons (NPT) defines a "Nuclear Weapon State" as "one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to January 1, 1967." India does not meet this definition, and we do not seek to amend the Treaty to provide otherwise. U.S. law adopts the NPT definition, so India is a non-nuclear weapon state for purposes of U.S. law.

[9] http://www.whitehouse.gov/news/releases/2005/07/20050718-6.html.

ANNEX—RECENT INDIA CASES

Order Date	Respondent	OEE Case Name	Charges	Sections Violated	VSD	Result	Criminal Case
03/17/06 ...	Tech Pro, Inc.	In the Matter of Tech Pro, Inc.	Exported software upgrades to the Vikram Sarabhai Space Center of Thiruvanthapuram, India, an organization on the Entity list	764.2(a)[1]	No	Settlement Agreement—civil penalty of $7,000	No
03/02/06 ...	Orcas International, Inc.	In the Matter of Orcas International, Inc.	Conspired and acted in concert with others, known and unknown, to export and attempted to export toxins from the United States to North Korea without the required license	764.2(d)[1] 764.2(b)[1]	No	Settlement Agreement—civil penalty of $19,800; export privileges denied for four years for items specified on the Commerce Control List	No
03/02/06 ...	Vishwanath Kakade Rao	In the Matter of Orcas International, Inc.	Conspired and acted in concert with others, known and unknown, to export and soliciting an export of toxins from the United States to North Korea without the required license	764.2(d)[1] 764.2(c)[1]	No	Settlement Agreement—export privileges denied for four years	No
03/02/06 ...	Graneshawar K. Rao	In the Matter of Orcas International, Inc.	Conspired and acted in concert with others, known and unknown, to export and attempted to export toxins from the United States to North Korea without the required license	764.2(d)[1] 764.2(b)[1]	No	Settlement Agreement—export privileges denied for four years for items specified on the Commerce Control List	No

ANNEX—RECENT INDIA CASES—Continued

Order Date	Respondent	OEE Case Name	Charges	Sections Violated	VSD	Result	Criminal Case
03/02/06 ...	Dolphin International, Ltd.	In the Matter of Orcas International, Inc.	Conspired and acted in concert with others, known and unknown, to export and soliciting an export of toxins from the United States to North Korea without the required license	764.2(d)[1] 764.2(c)[1]	No	Settlement Agreement—civil penalty of $22,000; export privileges denied for four years	No
12/28/05 ...	Becton, Dickinson and Company	In the Matter of Becton, Dickinson and Company	Exported biomedical research products, labware for tissue culture and fluid handling and reagent systems for life sciences research to organizations in India on the Entity List without the required licenses	764.2(a)[36]	Yes	Settlement Agreement—civil penalty of $123,000; perform audit of internal compliance program within 24 months	No
08/10/05 ...	Quantachrome Instruments	In the Matter of Quantachrome Instruments	Exported an Automated Surface Area and Pore Size Analyzer and related scientific instruments to the Department of Atomic Energy, Bhabha Atomic Research Center, an organization on the BIS Entity List without obtaining the required license	764.2(a)[1]	No	Settlement Agreement—civil penalty of $6,000	No
07/13/05 ...	Gould Pumps, Inc.	In the Matter of Gould Pumps, Inc.	Exported magnetic drive and double mechanical seal industrial pumps and parts to Egypt, Saudi Arabia, India, Taiwan and the People's Republic of China without the required licenses; made false statements on SEDs	764.2(a)[13] 764.2(g)[13]	Yes	Settlement Agreement—civil penalty of $123,500	No

06/13/05 ...	Lufthansa German Airlines	In the Matter of Lufthansa German Airlines	Aided and abetted the export and attempted export of Cobalt-57 to the Department of Atomic Energy, Directorate of Purchase and Stores, India, an organization on the BIS Entity List without the required licenses and with knowledge that a violation would occur	764.2(b)[1] 764.2(b)[1] 764.2(e)[1]	No	Settlement Agreement—civil penalty of $18,000	No
03/31/05 ...	Teledyne Energy Systems, Inc.	In the Matter of Teledyne Technologies, Inc.	Exported technical information on proposed power plants to Bharat Heavy Electricals Ltd (''BHEL'') in New Delhi, India, an organization on the BIS Entity List without the required licenses	764.2(a)[3]	Yes	Settlement Agreement—civil penalty of $16,500	No
03/30/05 ...	Air Tiger Express	In the Matter of Air Tiger Express	Aided and abetted the unlicensed exports of items subject to the EAR to organizations in India that were on the Entity List	764.2(b)[9]	No	Settlement Agreement—civil penalty of $49,500	No
03/14/05 ...	Rockwell Automation, Inc.	In the Matter of Rockwell Automation, Inc.	Exported balancing machines to Malaysia, Mexico, Venezuela without obtaining the required licenses; made false statements on SED concerning authority to export; exported computer software and accessories to Bharat Heavy Electrical Limited, Hardwar, an organization on the BIS Entity List, without the required license; reexported software, data collectors and vibration monitors and associated parts from the United Kingdom to organizations listed on the Entity List without the required licenses	764.2(a)[11] 764.2(g)[6]	Yes	Settlement Agreement—civil penalty of $46,750	No
02/25/05 ...	Yarde Metals, Inc.	In the Matter of Yarde Metals, Inc.	Exported one aluminum plate to Vikram Sarahbai Space Center (VSSC) in India, an organization on the Entity List without the required license	764.2(a)[1]	No	Settlement Agreement—civil penalty of $10,000	No

ANNEX—RECENT INDIA CASES—Continued

Order Date	Respondent	OEE Case Name	Charges	Sections Violated	VSD	Result	Criminal Case
12/06/04 ...	Terra Universal Inc.	In the Matter of Terra Universal Inc.	Exported EAR99 items (12 stainless steel pass-through chambers and accessories) to the Solid State Physics Laboratory, an organization on the BIS Entity List without the required license	764.2(a)[1]	No	Settlement Agreement—civil penalty of $6,000	No
11/29/04 ...	E.A. Fischione Instruments, Inc.	In the Matter of E.A. Fischione Instruments, Inc.	Attempted to export EAR99 item (a plasma cleaner) to an organization in India on the BIS Entity List without the required license	764.2(c)[1]	No	Settlement Agreement—civil penalty of $6,300	No
11/24/04 ...	Shivram Rao	In the Matter of MTS Systems Corporation	Conspiracy to export EAR99 items (a thermal mechanical fatigue test system and a universal testing machine) to the Indira Gandhi Centre for Atomic Research (''IGCAR''), an organization on the BIS Entity List without the required license; took actions to evade the Regulations by diverting the true ultimate consignee; made false statements in the course of an investigation	764.2(d)[1] 764.2(h)[2] 764.2(g)[1]	No	Export privileges denied for 10 years for each (Default Judgment)	No
11/24/04 ...	Technology Options (India) Pvt. Ltd.	In the Matter of MTS Systems Corporation	Conspiracy to export EAR99 items (a thermal mechanical fatigue test system and a universal testing machine) to the Indira Gandhi Centre for Atomic Research (''IGCAR''), an organization on the BIS Entity List without the required license; took actions to evade the Regulations by diverting the true ultimate consignee; made false statements in the course of an investigation	764.2(d)[1] 764.2(h)[2] 764.2(g)[1]	No	Export privileges denied for 10 years for each (Default Judgment)	No

11/18/04 ...	Bernard A. Spear	In the Matter of Preston Scientific, Inc.	Exported EAR99 items (an amplifier, connector socket and spare parts) to an organization in India on BIS Entity List without the required licenses and with knowledge that violations would occur; made false statements on SED; made false statement to OEE Special Agent in the course of an investigation	764.2(a)[3] 764.2(e)[3] 764.2(g)[3]	No	Settlement Agreement—export privileges denied for three years	No
11/18/04 ...	Halear, Inc.	In the Matter of Preston Scientific, Inc.	Exported EAR99 items (an amplifier, connector socket, and spare parts) to an organization in India on BIS Entity List without the required licenses and with knowledge that violations would occur; made false statements on SEDs; made false statement to OEE Special Agent in the course of an investigation	764.2(a)[3] 764.2(e)[3] 764.2(g)[3]	No	Settlement Agreement—civil penalty of $60,000; export privileges denied for three years	No
11/12/04 ...	Bristol-Myers Squibb Medical Imaging, Inc., successor to Duport Merck Pharmaceutical Company	In the Matter of DuPont Merck Pharmaceutical Company	DuPont Merck exported and attempted to export Cobalt-57, iron foil, and potassium ferrocyanide to the Department of Atomic Energy, Directorate of Purchase and Stores, an organization on the Entity List without the required licenses and with knowledge that a violation would occur	764.2(a)[1] 764.2(c)[1] 764.2(e)[1]	No	Settlement Agreement—civil penalty of $16,200	No
11/09/04 ...	PartMiner, Inc.	In the Matter of PartMiner, Inc.	Exported electronic components to organizations in India on the BIS Entity List without the required licenses; failed to file SED; made false statements on SED	764.2(a)[14] 764.2(g)[4]	Yes	Settlement Agreement—civil penalty of $50,000	No
10/27/04 ...	Symmetricom, Inc., successor to Datum, Inc.	In the Matter of Datum, Inc.	Exported cesium frequency standard equipment to Malaysia without the required license; made false statements on SEDs concerning the authority to export; exported ovenized quartz crystal oscillator to an organization in India on the Entity List without the required license and with knowledge that a violation would occur	764.2(a)[2] 764.2(g)[2] 764.2(e)[1]	No	Settlement Agreement—civil penalty of $35,500	No

RECENT INDIA CASES

Order Date	Cases	Charges	Sections Violated	Respondents	Result
08/30/04	In the Matter of Chyron Corporation	Exported animation system to the Space Application Center in Ahmedabad, India, an organization on the Entity List, without the required license with knowledge that a violation of the EAR would occur; made false or misleading statement of material fact in connection with the preparation of an export control document	764.2(a)[1] 764.2(e)[1] 764.2(g)[1]	Chyron Corporation	Settlement Agreement—civil penalty of $15,300
08/30/04	In the Matter of New Brunswick Scientific Co., Inc.	Exported lab equipment, software and fermentor to the Directorate of Purchase and Stores, Department of Atomic Energy (DPS) in India, an organization on the Entity List, without the required license; failed to file a SEDs; exported fermentors to Taiwan and Israel without the required licenses; made false or misleading statements of material fact in connection with the preparation of an export control documents	764.2(a)[8] 764.2(g)[2]	New Brunswick Scientific Co., Inc	Settlement Agreement—civil penalty of $51,000

06/24/04	In the Mater of Berkeley Nucleonics Corporation	Exported pulse generators to the Directorate of Purchase and Stores, Department of Atomic Energy (DPS) in India and the Nuclear Power Corporation, organizations on the Entity List without the required licenses, with knowledge that violations of the Act would occur; made false or misleading statements of material fact in connection with the preparation and submission of an export control document; failed to file a SED; attempted to export from the United States to the DPS in India; former BNC employees Richard Hamilton and Vincent Delfino were also charged with export control violations	764.2(a)[5] 764.2(e)[5] 764.2(g)[3] 764.2(c)[1]	Berkeley Nucleonics Corporation Administrative Penalty:	Settlement Agreement—civil penalty of $40,000 Criminal Penalty: BNC: Five years' probation and $300,000 criminal fine Hamilton: Two years' probation, a $1,000 criminal fine, and 100 hours of community service, and prohibited from engaging in or facilitating export transactions Delfino: Two years' probation, a $1,000 criminal fine, and 100 hours of community service, and prohibited from engaging in or facilitating export transactions
06/24/04	In the Mater of The Sentry Company	Exported heat treating containers to Bharat Dynamics Ltd., Hyderabad, India, an organization on the Entity List without the required licenses	764.2(a)[4]	The Sentry Company	Settlement Agreement—civil penalty of $25,000
06/24/04	In the Matter of Kennametal Inc.	Exported nickel powder to Israel, Chile, Mexico, Peru, Taiwan, and India without the required licenses; made false or misleading representation on SED concerning authority to export; failed to retain export control documents	764.2(a)[45] 764.2(g)[27] 764.2(i)[3]	Kennametal Inc.	Settlement Agreement—civil penalty of $262,500

RECENT INDIA CASES—Continued

Order Date	Cases	Charges	Sections Violated	Respondents	Result
06/04/04	In the Matter of General Monitors, Inc.	Caused the shipment of gas and fire detection equipment from the United States to Bharat Heavy Electrical Limited of Hyderabad, India (BHEL), an organization on the Entity List without the required licenses; made false statements on Shippers Export Declarations (SEDs)	764.2(a)[6] 764.2(g)[12]	General Monitors, Inc.	Settlement Agreement—civil penalty of $40,000
04/14/04	In the Matter of RLC Electronics, Inc.	Exported power dividers and low pass filters to the Indian Space Research Organization (''ISRO''), Telemetry, Tracking and Command Network (''ISTRAC''), Bangalore, India, an organization on the Entity List without the required licenses; filed a Shippers Export Declaration with the U.S. Government that represented falsely that the power dividers exported to ISRO were eligible for export as NLR	764.2(a)[4] 764.2(g)[1]	RLC Electronis, Inc.	Settlement Agreement—civil penalty of $30,000
03/10/04	In the Matter of Atlas Copco Compressors Inc.	Caused the shipment of items subject to the EAR (seals and o-rings) to Bhrat Heavy Electrical Limited, Hyderabad, Inda (BHEL), an organization on the Entity List; engaged in prohibited conduct by submitting an export license application to BIS that sought authorization to ship items that had already been shipped	764.2(a)[2]	Atlas Copco Compressors Inc.	Settlement Agreement—civil penalty of $13,000
03/04/04	In the Matter of Alicat Scientific, Inc.	Caused the export of mass flow meters and power supplies to the Department of Atomic Energy, Mumbia, India, an organization on the Entity List	764.2(a)[1]	Alicat Scientific, Inc.	Settlement Agreement—civil penalty of $7,000, $2,000 suspended
02/26/04	In the Matter of Dunmore Corporation	Exported metallized polyimide films to India without obtaining the required authorization	764.2(a)[4]	Dunmore Corporation	Settlement Agreement—civil penalty of $27,000

01/15/04	In the Matter of Massive International Incorporated	Attempted to export hydraulic stud tensioners to Bharat Heavy Electrical Limited of Tiruchirapalli, India, an organization on the Entity List, without the required license with knowledge that a violation of the EAR would occur	764.2(c)[1] 764.2(e)[1]	Massive International Incorporated	Settlement Agreement—civil penalty of $13,000
01/30/04	In the Matter of Denton Vacuum, LLC	Exported a sputtering system to Solid State Physics Laboratory, New Delhi, India, an organization of the Entity List; filed or caused to be filed a SED that represented falsely that the sputtering system was eligible for export under the authority of GDEST	764.2(a)[1] 764.2(g)[1]	Denton Vacuum, LLC	Settlement Agreement—civil penalty of $7,000
11/12/03	In the Matter of Future Metals, Inc.	Exported aluminum bars to India without the required export licenses, with knowledge that a violation of the Act, the Regulations, or any other, license or authorization; exported stainless steel tubes to Hindustan Aeronautics Limited, Engine Division, in India, an organization of the Department of Commerce Entity List; failed to retain certain export control documents	764.2(a)[17] 764.2(e)[17] 764.2(i)[6]	Future Metals, Inc.	Settlement Agreement—civil penalty of $180,000
09/26/03	In the Matter of Astro-Med, Inc.	Attempted to export a Dash 10M data recorder to the Nuclear Power Corporation of India, an organization listed on BIS's Entity List, without the required license	764.2(c)[1]	Astro-Med, Inc.	Settlement Agreement—civil penalty of $5,000
07/17/03	In the Matter of DSV Samson Transport, Inc.	Caused the export of items to organizations listed on the BIS Entity List without the required license, with knowledge that the goods would be exported in violation of the Regulations; made false and misleading material misrepresentations on Shipper's Export Declaration concerning the authority to export	764.2(b)[33] 764.2(e)[23] 764.2(g)[3]	DSV Samson Transport, Inc.	Administrative Penalty: Settlement Agreement—civil penalty of $399,000 Criminal Penalty: $250,000 criminal fine and five years' corporate probation

RECENT INDIA CASES—Continued

Order Date	Cases	Charges	Sections Violated	Respondents	Result
11/08/01	In the Matter of Detector Electronics Corporation	Exported U.S.-origin ultraviolet fire detection systems to Bharat Heavy Electrical Limited, an organization on the Entity List, without obtaining the required licenses	764.2(a)[2]	Detector Electronics Corporation	Settlement Agreement—civil penalty of $15,000
04/26/01	In the Matter of Quest Technologies, Inc.	Exported from the United States chlorine and sulphur dioxide gas sensors to Vietnam, Taiwan, India, the United Arab Emirates, Egypt, and Saudi Arabia without obtaining the required licenses	764.2(a)[45]	Quest Technologies, Inc.	Settlement Agreement—civil penalty of $225,000, $135,000 suspended for one year
03/15/01	In the Matter of Optical Associates, Inc.	Exported U.S.-origin Mask Aligner and parts from the United States to Bhaba Atomic Research Center, an entity on the Department of Commerce Entity List	764.2(a)[1]	Optical Associates, Inc.	Export privileges denied to India for three years
02/02/98	In the Matter of Coherent, Inc.	Exported to the Department of Atomic Energy, in India, U.S.-origin plasma tubes for use in argon ion lasers without the required validated export licenses	787.6[2]	Coherent, Inc.	Settlement Agreement—civil penalty of $20,000

RECENT INDIA CASES

Order Date	Parties	Charges	Sentences
11/18/05	Fiber Materials, Walter Lachman, Maurice Subilia	Conspiracy and violation of the Export Administration Act related to the unlicensed export to India of equipment to manufacture carbon-carbon components with applications in ballistic missiles	Lachman: Three years' probation (first year in home detention); $250,000 criminal fine Subilia: Three years' probation (first six months in community confinement, followed by one year in home detention); $250,000 criminal fine Fiber Materials: $250,000 criminal fine
06/06/04	In the Matter of Coherent, Inc.	Exported to the Department of Atomic Energy, in India, U.S.-origin plasma tubes for use in argon ion lasers without the required validated export licenses	Coherent, Inc.

Additional Material Submitted for the Record

Information Submitted by the Center for Nonproliferation Studies, Monterey Institute of International Studies

NONPROLIFERATION ISSUES RAISED BY U.S.-INDIA NUCLEAR DEAL, MARCH 2, 2006

With few details yet known regarding the content of the agreement signed by U.S. President George W. Bush and Indian Prime Minister Manmohan Singh, it is too early to provide a comprehensive authoritative analysis and evaluation of the accord. Nonetheless, what has been initially disclosed about the pact raises a range of important issues, which will require further attention as the agreement is assessed by the U.S. Congress, the 45-member Nuclear Suppliers Group, and the broader international community.

A fundamental question raised by the agreement is whether it strengthens or weakens efforts to curb the spread of nuclear weapons.

Issue I: In explaining the agreement the Bush administration has stressed that India has enacted tough export control regulations, agreed to continue its moratorium on nuclear testing, agreed not to export sensitive uranium enrichment and plutonium separation (reprocessing) technologies, and to work with the United States on negotiating a global ban on the production of fissile material for nuclear weapons.

- An assessment will be needed of which of these undertakings were already Indian policy prior to the July 18, 2005, Bush-Singh summit, where the contours of the March 2 agreement were endorsed; which are required by international law, irrespective of the March 2 agreement; and which are the product, specifically of the March 2 agreement.

Issue II: Under the agreement India will undertake to divide its nuclear facilities into civilian and military installations and to place the civilian facilities under International Atomic Energy Agency (IAEA) inspection, precluding their use for nuclear weapons. Information released on March 2 indicated that India will place approximately two-thirds of its nuclear installations under IAEA monitoring.

- An assessment will be needed as to whether the division between civilian and military facilities constrains Indian nuclear weapons production capabilities or leaves such capabilities intact, or actually facilitates India's ability to produce more fissile material.

Issue III: Based on available information, a number of nuclear power reactors, using Canadian-supplied technology, will not be placed under IAEA inspection, but will be placed on India's military list, intended for use in the country's nuclear weapons program. These facilities can be used both to produce electricity and weapons-quality plutonium.

- An assessment will be needed as to whether the division means that technology originally supplied by outside states that was intended for peaceful uses will now be used for military purposes. If India has now declared a diversion of technology from peaceful to military use, an assessment will be required as to whether India can be expected to reliably abide by future civil nuclear trade agreements.

Issue IV: It appears that plutonium (separated and in spent fuel) that was created previously in reactors that will now be placed under IAEA inspection will not, itself, be subject to inspection. This will provide a substantial stockpile of material for the enlargement of the Indian nuclear weapons arsenal.

- An assessment will be needed of the impact of this uninspected stockpile of material on the overall dimensions of the March 2 agreement.

Issue V: It appears that new civil nuclear cooperation by the United States and other members of the Nuclear Suppliers Group could provide uranium supplies for the Indian nuclear power program that will enable India to use more limited indigenous uranium supplies for nuclear weapons.

- An assessment will be needed of whether such assistance from the United States would violate its obligation under the nuclear Nonproliferation Treaty to "not in any way to assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices. . . ." Other nuclear supplier states have similar obligations.

Issue VI: Ending the nuclear trade embargo against India could create important precedents.

- An assessment will be needed as to whether the United States-India agreement: Will encourage other similarly situated states, such as Pakistan, to seek com-

parable exceptions from existing international rules of nuclear commerce; will encourage other states, such as Iran, to leave the nuclear Nonproliferation Treaty; will encourage states like Brazil, which joined the NPT in the expectation that this would provide access to civil nuclear technology denied to states outside the treaty, to reconsider their support for the treaty.

Issue VII: More broadly, in promoting the agreement, the Bush administration has emphasized that it is a key factor in cementing United States-Indian relations on such important issues as meeting the threat of radical Islam and serving as a military counterweight to China.

- With United States-Indian relations already flourishing, including in the area of defense cooperation, an assessment will be needed as to whether the agreement is central to the enhancement of United States-Indian strategic relations or merely an additional, nonessential element in improving ties between the two nations.

INDIA AND THE NEW LOOK OF U.S. NONPROLIFERATION POLICY [1]

(By William C. Potter, Center for Nonproliferation Studies)

The old football adage "You can't tell the players without a program" applies increasingly to the international politics of nonproliferation. Gone are the days when the United States routinely lined up on the side of those pursuing the goal of halting and reversing the spread of nuclear weapons. This change in Washington's nonproliferation game plan has been underway for some time, but was most clearly expressed in the July 18, 2005, India-United States Joint Statement. This extraordinary document, which reverses more than a quarter century of U.S. declaratory policy, suggests that the national security team of George W. Bush regards nuclear proliferation to be both inevitable and not necessarily a bad thing.

In light of the magnitude of this policy shift and its potential to impact negatively on the NPT, associated nonproliferation institutions, and even elements of the President's own nonproliferation initiatives, one would have expected the policy announcement to follow a careful and systematic review of the costs and benefits of the proposed change. A rational decision would have required input from all of the major governmental players with nonproliferation responsibilities, including the senior officials in charge of nonproliferation policy in the Departments of State and Energy. In fact, however, the new policy appears to have been formulated without a comprehensive high-level review of its potential impact on nonproliferation, the significant engagement of many of the government's most senior nonproliferation experts, or a clear plan for achieving its implementation. Indeed, the policy shift bears all the signs of a top-down administrative directive specifically designed to circumvent the interagency review process and to minimize input from any remnants of the traditional "nonproliferation lobby." [2]

WHAT PRECISELY HAS CHANGED?

U.S. nuclear export policy has undergone at least three major transformations since 1945. An initial emphasis on secrecy and denial, highlighted by the 1946 Atomic Energy Act, gave way in 1954 to the active promotion internationally of peaceful uses of atomic energy. This phase came to an end in 1974 following the Indian detonation of a "peaceful nuclear explosion" and the adoption by the United States of an export policy emphasizing technology control. Although Washington's public rebuke of India was mild, the Indian explosion not only led to a major revision in U.S. thinking about nuclear exports, but it had the effect of moving nonproliferation from the periphery toward center stage on Washington's foreign policy agenda. One consequence of the change in priority was intensification of U.S. diplomatic efforts to establish strict guidelines for the major nuclear exporting states covering the transfer of nuclear fuel and sensitive technology. An important multinational initiative—the Nuclear Suppliers Group (NSG)—was mobilized for this purpose.

The NSG politically obligates its 45 members to pursue two sets of guidelines for nuclear and nuclear-related dual-use exports. Central to the guidelines, which like other aspects of NSG policy were adopted by consensus, is the principle that only NPT parties or other states with comprehensive ("full-scope") safeguards in place should benefit from nuclear transfers. It is this principle of comprehensive safeguards as a condition for export, which the United States labored long and hard to

persuade the NSG to adopt, that will have to be abandoned if the India-United States Joint Statement is implemented.

The key provision of the joint statement that will necessitate a fundamental change in U.S. nuclear export policy is the promise by the U.S. President that he will seek to adjust U.S. laws and policies, as well as international regimes, to enable full civil nuclear energy cooperation and trade with India. These adjustments are necessary since India does not have full-scope safeguards in place and is one of only four states (along with Israel, Pakistan, and North Korea) that remain outside of the Treaty on the Nonproliferation of Nuclear Weapons (NPT). By promising that the United States will work to achieve full civil nuclear cooperation with India, President Bush has announced, for all practical purposes, that technology control is no longer the cornerstone of U.S. nuclear export and nonproliferation policy. Instead, it has given way to a strategy in which politics has primacy and regional security and international economic objectives trump those of nonproliferation. Although this shift is not the first time nonproliferation objectives have been subordinated to other U.S. foreign policy considerations, it represents the most radical change in recent nuclear export policy.

THE UNDERPINNINGS OF THE NEW POLICY

It always is dangerous to attribute much rationality to the process by which policy changes or to assume that policy will be internally consistent. Moreover, as suggested above, it is not obvious that nonproliferation considerations were given much weight in the decision to alter U.S. policy toward India. Nevertheless, to the extent that assumptions about proliferation influenced the shift in U.S. policy, they would appear to include the following perspectives:[3]

1. Nuclear proliferation is inevitable; at best it can be managed, not prevented. According to this perspective, nuclearization of the Indian subcontinent should have been anticipated and cannot be reversed. Although the pace of nuclear weapons spread globally has been much slower than predicted, we are approaching a new "tipping point" in which a number of second tier states may "go nuclear." U.S. policy to counter proliferation must be selective. In those instances in which the United States cannot prevent nuclear weapons spread, it can and should seek to influence the development of responsible nuclear weapons policies on the part of new nuclear nations that are consistent with U.S. national interests, including the adoption of enhanced safety and security procedures and practices.

2. There are good proliferators and bad proliferators. U.S. decisionmakers and scholars generally have viewed the spread of nuclear weapons negatively. This perspective has persisted for most of the post-World War II period and has not varied greatly regardless of the orientation of the prospective proliferator. Throughout most of the 1970s and 1980s, for example, U.S. nonproliferation declaratory policy remained adamantly opposed to the spread of nuclear weapons despite the fact that many of the countries of greatest proliferation concern—states such as Argentina, Brazil, Israel, South Africa, Taiwan, South Korea, and even India and Pakistan—were either friends of the United States, or at least not its adversaries. This prevailing perspective continued during the 1990s at a time when the number of states of proliferation concern diminished but were seen to be more anti-American in orientation (e.g., Iraq and Iran). A minority viewpoint, however, has long questioned the assumption that proliferation necessarily was undesirable. Kenneth Waltz, in particular, popularized the view that the spread of nuclear weapons may promote regional stability, reduce the likelihood of war, and make wars harder to start.[4] Although it is not obvious that the proponents of a reorientation in U.S. policy toward India have been directly influenced by Waltz's arguments, the India-United States Joint Statement indicates more clearly than ever before that Washington is not opposed to the possession of nuclear weapons by some states, including those outside of the NPT.[5] This new policy of nonproliferation exceptionalism is far more explicit and pronounced than prior routine efforts by the United States and its allies to deflect criticism of Israel's nuclear policies in different international fora. As one defense expert close to the administration reportedly put it, unlike the Clinton administration which "had an undifferentiated concern about proliferation," the Bush administration is not afraid to distinguish between friends and foes.[6]

3. Multilateral mechanisms to prevent the spread of nuclear weapons are ineffectual. The Bush administration has consistently exhibited a strong preference for foreign policy and military tools that are unconstrained by the need to seek approval from international organizations or multilateral bodies be they the IAEA, the U.N. Security Council, or even NATO. This general orientation applies with equal force to the nonproliferation sphere, and was in evidence at the 2005 NPT Review Conference in which the United States invested few resources, was ill-prepared, and

lacked even a realistic vision about what would constitute a productive outcome. For those inclined to be dismissive of the utility of multilateral instruments, the inability of the unwieldy NPT body to agree on any nonproliferation measures must have reinforced their prior conviction that nonproliferation progress will only be achieved by unilateral action or streamlined "coalitions of the willing." Ironically, in light of the changes it has promised to seek pursuant to the joint statement, the one established multilateral nonproliferation body that the Bush administration had sought to strengthen recently was the NSG.

4. Regional security and economic considerations trump those of global nonproliferation. Diplomats and scholars have long struggled with the problem of how best to enhance nuclear stability in South Asia without appearing to reward those few states not party to the NPT—the most widely subscribed-to treaty in the world. Compounding this dilemma is the difficulty of reconciling the reality that India, Israel, and Pakistan possess nuclear weapons with the language of Article IX of the NPT that explicitly restricts nuclear weapon status to those five states which manufactured and exploded a nuclear weapon prior to January 1, 1967. The India-United States Joint Statement essentially resolves the dilemma by ignoring how other states may interpret the repudiation by the United States of existing domestic law and international political obligations regarding nuclear trade with a non-NPT state. It does so, presumably, because the powers that be in Washington have determined that a combination of international political and economic objectives takes precedence over nonproliferation considerations. Although these objectives have not yet been publicly enunciated by the administration, there is good reason to believe that they include the conviction that a substantial Indian nuclear arsenal will serve U.S. interests in Asia in the future vis-a-vis a more assertive and powerful China.

The convergence of United States and Indian national security interests vis-a-vis China is emphasized by Robert Blackwill, U.S. Ambassador to India during President Bush's first term and often cited as the most influential proponent of the shift in U.S. policy toward India.[7] According to Blackwill, there are "no two [other] countries which share equally the challenge of trying to shape the rise of Chinese power."[8]

This argument is made even more explicitly by Ashley Tellis in a report issued by the Carnegie Endowment for International Peace four days before the joint statement by President Bush and Prime Minister Singh.[9] According to Tellis, who served as Senior Policy Advisor to Blackwill during his tenure in India and is also credited to be one of the principal intellectual architects of the new U.S. policy, it would be a mistake to attempt to integrate India "into the nonproliferation order at the cost of capping the size of its eventual nuclear deterrent."[10] To do so would be "to place New Delhi at a serious disadvantage vis-a-vis Beijing, a situation that could not only undermine Indian security but also U.S. interests in Asia in the face of the prospective rise of Chinese power over the long term."[11] To his credit, Tellis openly acknowledges the fundamental danger to the global nonproliferation regime posed by the shift in U.S. policy that his report anticipated. However, he believes the risk is manageable and is justified by U.S. geopolitical interests that transcend nonproliferation.

In this regard, it should be noted that some elements of the new U.S. policy toward India have antecedents in which nonproliferation considerations in South Asia also took a back seat to other foreign policy and national security objectives. This situation prevailed vis-a-vis Pakistan throughout most of the 1980s following the Soviet invasion of Afghanistan. It also can be discerned after 9/11 in the less than forceful manner in which the United States has pressed Pakistan to reveal the full scope of the AQ Khan network. Prior to the July 18 joint statement, however, the tradeoffs between pursuing global nonproliferation objectives and those of regional security were never linked as directly or publicly.

WHAT ARE THE LIKELY CONSEQUENCES?

It is difficult to isolate the nonproliferation impact of the India-United States Joint Statement from a number of other developments. It also is premature to assess the longer term nonproliferation consequences of the reorientation in U.S. policy toward India. To some extent, the impact of the July statement will depend on its implementation by Washington and New Delhi, how widely it is emulated and/or supported by other major states, and the degree to which it is reflected in further departures from traditional U.S. nonproliferation policy. Nevertheless, one can venture a number of hypotheses about how the turn in U.S. policy may affect the international dynamics of nonproliferation.

Erode the NPT

One of the most influential studies of U.S. nuclear nonproliferation policy adopted as a guiding principle Florence Nightingale's admonition that "Whatever else hospitals do they should not spread disease."[12] Although the joint statement purports to encourage more prudent nonproliferation behavior by India, it is far more likely to promote the further spread of nuclear weapons by eroding the norm of nonproliferation embodied in the NPT. It is apt to have this effect by reinforcing doubts by many NPT members about the commitments by the nuclear weapon states (NWS) to their treaty obligations and the benefits the nonnuclear weapon states (NNWS) derive from the treaty.

The timing of the joint statement, coming on the heels of the disappointing and largely unproductive 2005 NPT Review Conference, will be perceived by many states as further evidence that the United States cannot be counted on to honor its nonproliferation obligations. Contributing to this view is the not unrealistic assessment on the part of many NPT members that U.S. policy in the leadup to the Review Conference and during its negotiation was characterized by relatively low-level and inexperienced representation, inadequate preparation, little interagency coordination, inconsistent policy implementation, and little concern for the consequences of a failed conference. NPT members also will not overlook the parallels between the U.S. readiness to disavow political commitments it undertook with respect to arms control and disarmament at the 2000 NPT Review Conference (i.e., the "13 Practical Steps") and the further disavowals that the joint statement will require if it is implemented. These pertain to the Decision on Principles and Objectives for Nuclear Non-Proliferation and Disarmament taken at the 1995 NPT Review and Extension Conference that "New supply arrangements . . . should require as a necessary precondition, acceptance of IAEA full-scope safeguards and internationally legally binding commitments not to acquire nuclear weapons or other nuclear explosive devices" (paragraph 12), and the reaffirmation of this principle at the 2000 NPT Review Conference. Given this recent proclivity by the United States to interpret selectively its NPT and NSG obligations, other NPT members may reasonably question the value Washington attaches to the current fabric of nonproliferation treaties, regimes, and guidelines and reduce their own investments in nonproliferation accordingly. How, one may ask, does the United States persuade Malaysia, Indonesia, Sri Lanka, Pakistan, or China to strengthen their nuclear export controls when it announces its intention to weaken its own nuclear export regulations?

The joint statement also is apt to be reviewed particularly closely and critically by a number of NPT members who themselves previously possessed nuclear weapons or pursued their acquisition. Although the United States did not formally recognize India as an nuclear weapon state in the joint statement, the voluntary nature of IAEA safeguards that the Indian Prime Minister agreed to accept and the limitation of these safeguards to India's civilian nuclear program convey the impression that the United States is prepared to treat India for some purposes as it does other nuclear weapons states recognized by the NPT. This change in posture, which will almost certainly be viewed by most states as a reward to India for its nuclear weapons tests, is apt to be resented strongly by countries such as South Africa and Ukraine that previously claimed nuclear weapons but relinquished them in order to join the NPT as NNWS. It will be regarded with equal resentment by regional powers such as Argentina, Brazil, and Egypt that explored a nuclear weapons option, but voluntarily chose to forego that possibility in favor of membership in the NPT.

It is reasonable to assume that these and other states that at one time or another seriously contemplated and/or pursued military nuclear programs may reconsider the wisdom of their prior nonproliferation decisions in light of the new U.S. posture toward India. A similar reassessment of the value of the NPT for their national security may be undertaken by a set of NNWS that have not actively pursued a nuclear weapons option, but made explicit the conditionality of their NPT membership on assurances that the international community would not recognize any additional NWS. Japan is perhaps the best example of this group. Not only has it has been the most consistent and outspoken critic of the Indian and Pakistani nuclear tests, but its senior officials repeatedly have emphasized that if the assurances Japan received prior to joining the NPT were not honored, it would have to reconsider the role of the treaty in promoting its security. The point to emphasize in this regard is not that Japan or any other state necessarily will repudiate their NPT membership as a direct consequence of the shift in U.S. policy toward India, but rather to acknowledge that decisionmaking about nonproliferation is a dynamic process that does not end with accession to the NPT. Just as U.S. policy preferences regarding nonproliferation may change over time, so may of those countries that currently adhere to the NPT as nonnuclear weapon states.

The shift in U.S. policy toward India also coincides with growing frustration by many nonnuclear weapons states with the pace of nuclear disarmament and the commitment on the part of the nuclear weapon states to their Article VI legal obligations, as well as those political commitments assumed under the 1995 Decision on Principles and Objectives and the 13 Practical Steps of the 2000 NPT Review Conference final declaration. If, as is likely, the reorientation in U.S. policy toward India is embraced, or at least accepted, by the four other NWS parties to the treaty, one or more NNWS may decide that dramatic action is required to demonstrate the erosion of the NPT and its diminished value as a means to achieve disarmament. Although the joint statement by itself is unlikely to lead directly to the defection by one of these disenchanted NNWS, it could provide further impetus for such an act by a country such as Mexico or Egypt. In the case of Mexico, the defiant action almost certainly would be only symbolic. In the Egyptian case, however, a desire to highlight the disarmament shortcomings of the NPT may coincide with other less symbolic reasons for leaving the treaty, including dissatisfaction with the lack of implementation of the 1995 resolution on the Middle East and wariness in Cairo that Iran has embarked on a dedicated nuclear weapons program. If, as a consequence of the joint statement, Egyptian decisionmakers perceive the costs of leaving the NPT to be diminished, their overall nonproliferation calculus could be significantly altered.

Undermine Efforts To Strengthen Export Controls

On February 11, 2004, President Bush gave a major address at National Defense University in which he outlined a new nonproliferation strategy. A key component of his proposal was to close a perceived loophole in Article IV of the NPT that enables NNWS to acquire all forms of nuclear technology, including sensitive uranium enrichment and plutonium reprocessing facilities, as long as they are under IAEA safeguards and are used exclusively for peaceful purposes. In particular, President Bush called on the Nuclear Suppliers Group to tighten its export control guidelines by prohibiting the export of enrichment and reprocessing technology and equipment to countries that do not already operate enrichment and reprocessing plants. This initiative, prompted in particular by Iran's pursuit of a uranium enrichment capability, appeared to attach increasing importance to the NSG as a primary antiproliferation mechanism that might compensate in part for deficiencies in the less flexible NPT. The President's 2004 proposal also was consistent with U.S. efforts to strengthen the NSG throughout much of its existence, including successful efforts to fend off attempts by Russia in recent years to dilute the body's guidelines by creating a special nuclear export exception for India. The tough U.S. stance on exports, apparent as late as the last NSG meeting in June 2005, actually appeared to yield some results as Russia, in what one commentator described as a "fit of lawabidingness," reluctantly told India in late 2004 that it could no longer supply nuclear fuel for two reactors at Tarapur because of NSG constraints.[13]

No doubt, policymakers in Russia feel vindicated by the shift in U.S. policy signaled by the July 2005 joint statement. Nuclear vendors in France and a number of other NSG states that have long eyed the market opportunities in India also will applaud the new U.S. approach and can be expected to encourage their governments to support the creation of a special export regime for India under the NSG even if it means establishing the principle of exceptionalism.[14] Although numerous NSG members are likely to have major reservations about the negative nonproliferation impact of nuclear exports to a non-NPT state, most are likely to hold their noses and not overtly oppose Washington's efforts to modify the NSG export guidelines. According to several U.S. officials who asked not to be named, ultimately the NSG will adopt the change in policy advocated by the United States, although at the cost of undermining the ability of President Bush to achieve what had been the priority objective of limiting exports of uranium enrichment technology and equipment.[15]

Already Iranian nuclear negotiators have pointed out the inconsistency of U.S. efforts to deny enrichment technology to a NNWS party to the NPT while supporting nuclear trade with a non-NPT state that has a dedicated and demonstrated nuclear weapons program. The tenuous logic of the new U.S. position also is not apt to be lost on the DPRK or some NPT NNWS that would like to acquire dual use technology capable of producing weapons grade fissile material under the guise of a civilian nuclear energy program. In addition, one must assume that new NSG members such as China will find it much more difficult to internalize the argument about the importance of stringent nuclear exports when U.S. policy is applied in an exceptionalist fashion. A Congressional Research Service Report for Congress, for example, observes that the United States-India nuclear cooperation could prompt other suppliers, like China, to justify nuclear exports to Pakistan.[16]

CAN ONE LIMIT THE DAMAGE?

It is unrealistic to assume that the Bush administration will acknowledge that nonproliferation instruments and norms have been weakened as a result of the India-United States Joint Statement or attempt to repair the damage that already has been done. It also is unlikely that Congress will challenge the President directly on his initiative, particularly if it is cast in terms of power politics vis-a-vis China. The administration, however, does not yet appear to have a clear plan about how to obtain the changes in, or waivers of, complex U.S. domestic law governing nuclear exports; nor can it be assured that Congress will be prepared to support either Presidential waivers or amendments to relevant provisions of the Atomic Energy Act prior to implementation by India of the safeguards commitments Prime Minister Singh pledged to undertake under the terms of the joint statement.[17] At a minimum, before acting on the administration's request, Congress should insist that India implement its safeguards commitments and pledge to continue to honor all prior legal understandings regarding U.S. nuclear transfers, including U.S. prior consent.[18] Although the administration is apt to resist an attempt by Congress to attach any additional conditions to the joint statement, it would be appropriate for Congress to call attention to the conspicuous absence in the joint statement of any commitment by India to cease production of fissile material for weapons purposes and to express the sense of Congress that such a pledge should be forthcoming before the United States is prepared to resume nuclear trade.

The Bush administration is apt to meet resistance initially at the NSG, which operates on the principle of consensus, to create a separate export control regime for India. Critics of the new approach will remind Washington of its own powerful arguments against such a move, and some NNWS members of the NSG, such as South Africa, Germany, and Canada, may oppose an exceptionalist approach as it will appear to devalue the benefits of NNWS membership in the NPT. Although it would be desirable for the NSG to resist the Bush administration's new plan, ultimately Washington is apt to get its way, particularly given the support its proposal will have from Russia, France, and possibly other NWS. This victory, however, is likely to be at the cost of losing any prospect for obtaining the restrictions it previously sought on the export of uranium enrichment and reprocessing technology and equipment. The best that can be hoped for from a nonproliferation perspective, is that NSG members can be persuaded that indeed India is an exceptional case and that similar exceptions should not be granted to other states that are outside of the NPT and do not subscribe to full-scope safeguards. Ashley Tellis, for example, argues that "[s]eeking exceptions while still trying to maintain universal goals need not weaken the larger nonproliferation order if the United States uses its power artfully to bring along leading countries within the regime. . . ."[19] That expectation, however, probably is unrealistic given the less than artful exercise of power typically displayed by the United States, the precedent that the Indian case will set, and the history of nuclear trade between other NSG and non-NPT members (e.g., China and Pakistan).

The Bush administration has avoided commentary on the possible impact of the joint statement on Indian-Pakistani relations. Although it is not obvious how the new U.S. stance toward India will enhance regional stability in South Asia, that objective needs to be pursued as a priority, as does the goal of improving the security of both nuclear weapons and fissile material. If the joint statement provides the United States with additional leverage to influence the nuclear posture of India and to reinforce prudent practices with respect to securing nuclear weapons and material, that opportunity should be exploited. In particular, the United States should discourage strongly any further expansion of the Indian nuclear arsenal and the production of additional fissile material for that purpose. India and Pakistan also both should be encouraged to refrain from nuclear weapon practices that could reduce crisis stability and prompt rapid employment of nuclear arms. Although the joint statement also should be utilized to reinforce India's prior good behavior in the nuclear export sphere, the far greater risk of imprudent exports resides in Pakistan, and it is not apparent how the new U.S. approach to India will improve Pakistani practices with respect to either nuclear exports or the safeguarding of its nuclear assets.

A number of the more harmful nonproliferation outcomes identified above could be mitigated were India and the United States to demonstrate that as part of their new strategic relationship they also were committing themselves or strengthening their existing commitments to a number of disarmament and nonproliferation measures highly valued by most members of the international community. Although there is no prospect that either state will undertake what would be the most powerful and significant gesture—ratification of the Comprehensive Test Ban Treaty—it

is conceivable, if unlikely, that several more modest but important measures could be supported. Both countries, for example, should express their support for an indefinite moratorium on nuclear testing. India also should agree to a moratorium, already in place for the United States, on the production of fissile material for military purposes, and both countries should support the conclusion of a verifiable Fissile Material Cut-Off Treaty. In addition, Washington should initiate the return to the United States of the small number of nonstrategic nuclear weapons currently deployed in Europe and propose steps to reduce its stockpile of nuclear warheads in addition to its deployed weapons.[20] Although implementation of these measures by India and the United States would not rectify all of the negative nonproliferation consequences of the joint statement, it would help to replenish what currently is a serious disarmament and nonproliferation credibility deficit in both countries.

CONCLUSIONS

In terms of nonproliferation, the best that reasonably can be expected to result from the India-United States Joint Statement is a one-time detour by the United States on the road toward promoting universal adherence to the objectives of the NPT. Sadly, this "best case" interpretation is more likely to be correct if, in fact, the recent decision to reverse policy on India was made in haste without due input from senior officials with nonproliferation responsibilities and with little regard to nonproliferation considerations. In that case, it is possible that the course of U.S. nonproliferation policy has not yet been fully determined and may constitute less of a break with traditional policy than has been suggested in this article. One indication of this tendency would be a disavowal by the Bush administration of its commitments under the joint statement if there is inaction or backsliding by India in its promised undertakings.

Some backsliding by both the United States and India is probably inevitable given complaints in both countries about who has to do what first. If treated as a target of opportunity, this slippage actually might be a good thing. It could afford the United States the opportunity to refurbish its nonproliferation credentials while still offering India the prospect of greater cooperation in the realm of nuclear safety and security, as well as research in nuclear fusion for power generation. Such a package could be crafted creatively so as not to collide directly with the NPT and the NSG, and could serve as a basis for similar arrangements with Pakistan.

To return to the football analogy, it is now an appropriate moment to call timeout. It is not too late to change the game plan. The stakes are very high and neither the United States nor the international community can afford to lose this nonproliferation match.

Endnotes:

[1] The author is grateful to Gaurav Kampani, Jean duPreez, Scott Parrish, Lawrence Scheinman, Nikolai Sokov, Leonard Spector, and Jonathan Tucker for their comments on an earlier draft of this paper.

[2] Telephone interviews by the author and other CNS staff with U.S. government officials (names withheld by request), July 19, 2005, and July 25, 2005. Gaurav Kampani compares the strategic shift and the manner in which it was accomplished to Kissinger's opening with China. Gaurav Kampani, correspondence with author, August 13, 2005.

[3] A number of these assumptions are shared by actors other than those wielding power in the Bush administration and several variants of them also found expression during the Clinton administration.

[4] See Kenneth N. Waltz, "The Spread of Nuclear Weapons: More May Be Better," Adelphi Paper 171 (London: International Institute for Strategic Studies, 1981). For an updated version of Waltz' argument see Scott D. Sagan and Kenneth N. Waltz, "The Spread of Nuclear Weapons: A Debate Renewed" (New York: Norton, 2003).

[5] One prominent advocate for the new policy who is familiar with Waltz' arguments is Ashley J. Tellis. See his important study, "India's Emerging Nuclear Posture" (Santa Monica, CA: RAND, 2001).

[6] Defense Science Board Chairman William Schneider quoted by Edward Alden and Edward Luce, "A New Friend is Asia," The Financial Times (August 21, 2001), *http://globalarchive.ft.com/globalarchive/articles.html.*

[7] See, for example, Dana Milbank and Dafna Linzer, "U.S., India May Share Nuclear Technology," Washington Post (July 19, 2005) and Zlatica Hoke, "U.S. and India Getting Closer Than Ever," Voice of America New Analysis (July 22, 2005).

[8] Robert Blackwill quoted in Hoke, "U.S. and India Getting Closer." See also, the Honorable Robert Blackwill, "Why is India America's Natural Ally?" In the National Interest (May 2005), *http://www.inthenationalinterest.com/Articles/May%202005/May2005BIackwill.html.*

[9] See Ashley J. Tellis, "India As a New Global Power" (Washington, DC: Carnegie Endowment for International Peace, 2005).

[10] Ibid, p. 25: For relevance to Tellis' role in the plan to change U.S. policy, see Milbank and Linzer.

[11] Ibid. Consistent with this perspective is the absence in the Joint Statement of any commitment by India to stop production of fissile material for weapons.

[12] Albert Wohlstetter et al., "Moving Toward Life in a Nuclear Armed Crowd?" Report to the U.S. Arms Control and Disarmament Agency (Los Angeles: Pan Heuristics, 1976, p. 1. A revised version of the report was published as "Swords from Plowshares" (Chicago: University of Chicago Press, 1979).

[13] See Henry Sokolski, "The India Syndrome: U.S. Nonproliferation Policy Melts Down," The Weekly Standard (August 1, 2005).

[14] Great Britain already has moved in this direction by announcing its intent to alter its nuclear export laws consistent with Washington's wishes. See "Britain To Ease Sanctions Against India," The Hindu (8–12–05) and Ashish Kumar Sen, "Nuclear Battle Lines Drawing," India Monitor (August 14, 2005).

[15] Telephone and personal interviews by CNS staff in the week following the July 18th Joint Statement.

[16] See Sharon Squassoni, "U.S. Nuclear Cooperation With India: Issues for Congress," CRS Report for Congress (Washington, DC: The Library of Congress, July 29, 2005), p. 7, *http://www.fas.org/sgp/crs/row/RL33016.pdf*.

[17] See Dennis M. Gormley and Lawrence Scheinman, "Implications of Proposed India-U.S. Civil Nuclear Cooperation," NTI Issue Brief, July 2005, *www.nti.orq*.

[18] On the issue of prior consent, see Sokolski, "The India Syndrome."

[19] Tellis, "India As a New Global Power," p. 27.

[20] These recommendations are consistent with the concept of a global "disarmament roadmap" for both NPT and non-NPT parties proposed by IAEA Director General Mohamed ElBaradei. See Mohamed ElBaradei, "Nuclear Non-Proliferation: Global Security in a Rapidly Changing World," Carnegie Endowment Non-Proliferation Conference, Washington DC (June 21, 2004).

1. CIVILIAN -- 6 directly imported power reactors

- Tarapur 1 &2 (U.S.) – 2 x160 MWe
- Rajasthan 1 & 2 (Canada) – 100 MWe + 200 MWe (The CANDU reactors India cloned.)
- *Kudankulam 1 &2 (Russia) – Under construction*

2. CIVILIAN -- 8 of 14 cloned Canadian-style (CANDU) power reactors.. Which ones, specifically, is to be decided, but Madras/Kalpakkam 1 & 2 will not go on civilian list because they are associated with breeder reactor program and are on the "strategic"Kalpakkam site

- ~~Madras 1 & 2 170 MWe + 220 MWe – Operating~~
- Narora 1 & 2 – 2 x 220 MWe - operating
- Kakrapar 1 & 2 – 2 x 220 MWe - operating
- Kaiga 1 & 2 – 2 x 220 MWe - operating
- Rajasthan 3 & 4 – 2 x 220 MWe - operating
- *Kaiga 3 & 4 (" ") 2 x 220 MWe -- Under construction*
- *Rajasthan 5 & 6 (" ") 2 x 220 MWe -- Under construction*

3. MILITARY -- 6 of 14 cloned Canadian-style (CANDU)

- Madras-Kalpakkam 1 &2 -- 170 MWe + 220 MWe – Operating (Indian has said that all installations at its Kalpakkam site will be on the military list)
- Plus 4 cloned Canadian-style (CANDU) from list 2, above, TBD

4. MILITARY -- 2 of 2 larger CANDU-style reactors

- Tarapur 4 – 540 MWe - operating
- *Tarapur 3 - 540 MWe Under construction*

OF INDIA"S 22 POWER REACTOR OPERATING OR UNDER CONSTRUCTION: Item 1 + Item 2 = 14 on CIVILIAN list; Item 3 + Item 4 = 8 on MILITARY list

5. MILITARY -- Bhabha Atomic Research Center (BARC) No facilities under IAEA safeguards; site is used to produce plutonium for nuclear weapons

- CIRUS reactor – 40 MWt – Under "peaceful use only" pledge to Canada. Closing 2010
- Dhruva reactor – 100 MWt -
- Trombay Reprocessing (plutonium extraction) Plant

6. MILITARY -- Uranium enrichment plant

- Rattehalli (capabilities not publicly known)

7. MILITARY -- Indira Gandhi Atomic Research Center (at Kalpakkam). No facilities under IAEA safeguards; site had predominantly civilian focus, but is changing orientation (?)

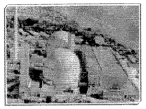
- Fast Breeder Test Reactor (based on French technology)
- Pilot-scale + large scale reprocessing plant
- Also includes Madras-Kalpakkam 1 & 2

8. MIXED -- Tarapur Reprocessing Plant – To be placed under IAEA inspection only when material being processed was produced in a safeguarded reactor. (Same as current situation.)

India's Separation Plan - Reactors

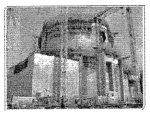
Civilian

Six imported reactors + **Eight Rajasthan clones ~ 8 x 200 MWe***



Canadian-Supplied Rajasthan 1 & 2 Reactors

U.S. –supplied Tarapur 1 & 2 Reactors



Russian-supplied Kudankulam 1 & 2 Reactors (under construction)

"The separation plan will not adversely effect our strategic programme. There will be no capping of our strategic programme…." *Prime Minister Manmohan Singh March 7, 2006*

"India's nuclear programme is unique as it is the only state with nuclear weapons not to have begun with a dedicated military programme. It must be appreciated that the strategic programme is an offshoot of research on [sic] nuclear power programme…" *India's Separation Plan, March 7, 2006*

*4 of 14 Rajasthan clones under construction

Military

Six Rajasthan clones 6 x 200 MWe*

Two larger CANDU-style reactors, Tarapur 3 & 4, (No. 4 under construction) 500 MWe x 2

Canadian-supplied CIRUS "peaceful use only" reactor - 40 MWt**
(To be shut down in 2010)

Dhruva reactor – 100 MWt**

Fast Breeder Test Reactor - 40 MWt uses French technology

Prototype Fast Breeder Reactor – 500 MWe (under construction)

** Believed to have been used for weapons

Insights on the U.S.-India Agreement

- The Separation Plan (Reactors)
  - No constraint on weapons production
  - Military program relies heavily on past civilian nuclear imports
  - Russia has advantage for new reactor sales
- Pending legislation
  - Agreement will deserve special scrutiny
    - Restoring lapsed agreement, unprecedented
    - History of past Indian violations of civil nuclear understandings led to Canadian, U.S., French cut-offs in 1970s
    - Ability to terminate agreement (including fuel sales) must be retained for safeguards violations, nuclear test, other violations
    - Specifics of safeguards arrangements must be well understood
    - Agreement deserves treatment as a non-conforming agreement (requiring affirmative vote of both Houses to enter into force), rather than as a conforming agreement (automatic entry into force, unless two Houses vote to oppose and, if necessary, to override a Presidential veto).

CNS

OPEN LETTER TO CONGRESS

(Experts in Support of the U.S.-India Civilian Nuclear Initiative)

CONGRESS SHOULD ENACT ENABLING LEGISLATION AUTHORIZING THE SHARING OF CIVILIAN NUCLEAR TECHNOLOGY WITH INDIA

Executive Summary

- Congress should enact enabling legislation authorizing the sharing of civilian nuclear technology with India to implement the agreement reached between President George W. Bush and Manmohan Singh.
- The enabling legislation is key to consummating a strategic partnership with India that would solidify military cooperation, a stable balance of power in Asia; mutually beneficial trade, investment and technological collaboration, the energy security of both countries and environmental protection.
- Failure to enact the legislation would be a body blow to the improvement now taking place in relations with India.
- The Nuclear Non-Proliferation Treaty (NPT) does not bar U.S. civilian nuclear cooperation with India. Existing United States law, however, goes beyond the NPT.
- The nuclear sharing initiative would make the world safer by bringing India within the international non-proliferation framework. India would place all its civilian nuclear reactors under International Atomic Energy Agency safeguards in perpetuity, thus barring the diversion of any nuclear materials for military use; continue its moratorium on nuclear testing; upgrade export controls on nuclear sensitive items; and, participate in the negotiation of a Fissile Material Cutoff Treaty.
- NPT signatories will not withdraw from the treaty and build nuclear arsenals because the United States helps India to meet its electricity needs through civilian nuclear power. Whether a country develops nuclear weapons depends on how it perceives its national security interests. India has pointed to nuclear-armed China and Pakistan in seeking to justify nuclear weapons. By contrast, Brazil and Argentina are not likely to make nuclear weapons because they do not perceive them to be necessary. South Korea and Japan are protected by a U.S. nuclear deterrent, and if they were to develop nuclear weapons, it would be in response to the threat posed by a nuclear-armed North Korea. Civilian nuclear cooperation with India would not set a precedent applicable to Iran, North Korea or Pakistan because they have either violated the NPT or proliferated to other nations.
- India's surging energy needs will lead it to construct more civilian nuclear facilities irrespective of the cooperation of the United States.
- Civilian nuclear energy is a major tool in combating global warming.
- No agreement is without risk. But the advantages of civilian nuclear sharing with India outweigh any plausible negative ramifications. The good should not be sacrificed on the altar of the perfect.

The administration will soon present to the Congress a request for action to implement the agreement between President Bush and Prime Minister Manmohan Singh providing for civilian nuclear cooperation with India. The signatories to this letter urge your support for the necessary legislation. This recommendation is based on our extensive experience and expertise relating to non-proliferation policy, security issues in Asia, the domestic economic and political environment in India and India-U.S. relations.

Congress should support the agreement to promote U.S. strategic interests, U.S. non-proliferation goals, U.S. energy security and global efforts to reduce greenhouse gas emissions leading to global warming. Failure to implement it would be a body blow to the development of the strong relationship with India so important to achieving U.S. goals in Asia and beyond. We present herewith the case for the agreement and our response to the arguments put forward in Congressional testimony by critics of the accord.

As Mohammed El Baradei, Director General of the International Atomic Energy Agency, said following the President's visit to New Delhi, "this agreement is an important step towards satisfying India's growing need for energy. It would also bring

India closer as an important partner in the non-proliferation regime . . . It would be a step forward toward universalization of the international safeguards regime."

The Strategic Case

The implementation of this agreement is necessary to promote a strategic partnership with a dynamic, self-reliant India that is playing an increasingly significant regional and global security role. Such a partnership has already begun to develop as a natural consequence of shared democratic values, compatible market economies, growing technological interdependence and a congruence of geopolitical interests. Extending this partnership to cooperation in civilian nuclear technology has now become urgent. With its population now past one billion, India needs a massive expansion of its civilian nuclear program in order to cope with an escalating energy shortage that could in time threaten its economic and political stability.

Against the background of China's rise, including the projected expansion of its naval reach in the South China Sea and the Indian Ocean, a strong, stable India will advance the traditional U.S. objective of an Asian balance of power in which no one nation is able to exercise overwhelming dominance. Since both the United States and India are seeking constructive relations with China, neither Washington nor New Delhi wants their new partnership to become an anti-Beijing security alliance. At the same time, as a series of joint naval exercises have shown, the U.S. and Indian navies are positioned for growing cooperation from the Persian Gulf to the Straits of Malacca. In the event of disruptions in the movement of critical energy supplies through Asian sealanes resulting from wars or piracy, this cooperation will enhance the ability of the United States to respond effectively. Apart from such direct military cooperation, the United States and India have a common strategic stake in combating Islamic extremism in Afghanistan, the Persian Gulf, the Middle East and Central Asia.

Two previous administrations have attempted to move toward a strategic partnership with India while keeping in quarantine any dealings related to civilian nuclear technology or dual-use technology with possible applications to Indian nuclear or missile programs. This approach has failed because India, a subcontinental giant with a middle class larger than the combined population of France, Germany and Britain, is endowed with a wealth of indigenous talent in science and technology and feels confident that it will achieve major power status with or without external help.

The Non-Proliferation Case

Implementation of the US-India civil nuclear agreement will advance the objectives of the Nuclear Nonproliferation Treaty (NPT) by opening the door to India's participation in the global non-proliferation regime. Contrary to the Congressional testimony of some specialists:

- The NPT does not bar the United States and other signatory nations from providing civilian nuclear technology under safeguards to non-signatories such as India. It is for this reason that the United Kingdom, France and Russia have endorsed the agreement. Congress went beyond the NPT by requiring safeguards on all of a country's nuclear installations as a condition for U.S. civilian nuclear cooperation. This has had consequences that conflict directly with U.S. nonproliferation goals. The United States can sell civilian nuclear reactors to China, which signed the NPT but has supplied nuclear weapons technology to Pakistan. At the same time, the United States has barred such sales to India, which did not sign the NPT but has never transferred nuclear technology to others. The justification put forward for this paradoxical result is based on a legal technicality: that China's 1964 test took place before the cutoff date for classification as a "nuclear weapons state" specified in the NPT, while India's 1974 and 1998 tests did not.

  We recognize that critics ofthe agreement have legitimate concerns about possible unintended consequences that cannot be foreseen. On balance, however, we believe that such concerns are less compelling than the clear, tangible, immediate benefits to the non-proliferation regime that will result from the agreement.
- The agreement will expand safeguards coverage ofthe Indian nuclear program by requiring India to place all existing and projected reactors designated by India as civilian under international safeguards in perpetuity. Initially, India insisted that reactors built without foreign involvement be exempt from safeguards, but withdrew this proviso during the negotiations with President Bush. These safeguards will remain in force in perpetuity. With or without U.S. help, India will be forced by burgeoning population growth to expand civilian nuclear

power exponentially for electricity generation, and it is important to bring this expanded capacity under international inspection.

- Prime Minister Singh has fulfilled his commitment in the accord that India would "identify and separate civilian and nuclear facilities in a phased manner." After bitter internal battles with nuclear nationalists in India, the Prime Minister has presented a credible eight-year timetable designating which of India's existing nuclear facilities are now restricted to nuclear power generation, which ones will be shifted over to civilian purposes at specified stages, and which ones will be left for military use. India's nuclear hawks wanted a much shorter civilian list. By 2014, 65 percent of India's existing installed thermal nuclear capacity, 14 of 22 reactors, will be restricted to civilian purposes. As Undersecretary of State Nicholas Burns stated on March 2, safeguards will apply to all future civilian power reactors and "breeder reactors that are classified as civilian" by India. The reactors to be placed under safeguards include several that India built with its own know-how and resources. In the past it has refused to place them under safeguards, but will do so now in order to be able to get foreign fuel and components.

  Critics object to the fact that the agreement gives India the freedom to build new military reactors and exempts key research and development facilities with a military potential from safeguards, such as any breeder reactors not classified as civilian. Given the magnitude and projected growth of its energy needs, however, India appears likely in its own self-interest to use fast-breeder reactors it may subsequently build for civilian purposes, as its current plans envisage.

  Another often-expressed objection is that the agreement will enable India to use its indigenous uranium for military reactors, since civilian reactors will be able to rely increasingly on imported uranium fuel. But as The Washington Post has pointed out, "leaving a potentially large plutonium-making program outside the scope of multilateral inspections is not a setback relative to the status quo," since India would have been free to continue making as many nuclear weapons as it deemed necessary regardless of the July accord, using breeder reactors as well as uranium-fueled reactors.

  The critics object to the very concept of a civilian-military separation plan that implicitly acknowledges the military component of the Indian nuclear program. But this acknowledgement was long-overdue. India has been a de facto nuclear weapons state since 1974, and U.S. policy under two administrations has already given de facto recognition to this reality.

- Critics also argue that the accord will lead countries that accepted the NPT and gave up their own nuclear aspirations to consider reactivating their weapons programs. In our view, what could put pressure on these countries is not the deal with India but the geopolitical situation in their own regions. Thus, Brazil and Argentina would appear unlikely to reopen their NPT adherence, and should, in any case, have access to nuclear technology, given their compliance to date with Article One.

  By contrast, North Korea, an NPT signatory, says it has developed nuclear weapons, pointing to perceived security threats that have nothing to do with the U.S.-India agreement. Similarly, if South Korea, Taiwan or Japan were to convert their U.S.-aided civilian nuclear programs to weapons development, it would be in response not to the agreement but to changing geopolitical factors.

  Finally, critics believe that the bargain with India may invite countries that already have nuclear weapons, like North Korea and Pakistan, or are seeking to develop a nuclear weapons option, like Iran, to demand equal treatment. But India's record of observing Article One stands in sharp contrast to Pakistan's role as a wholesale proliferator and to the failure of Iran and North Korea to abide by their NPT commitments.

- The agreement will strengthen India's commitment to participating in international efforts to prevent proliferation. India has not exported nuclear material or technology, but because it has been treated as an object of suspicion by the Nuclear Suppliers Group and other nonproliferation institutions, it has not directly participated in their work. The agreement not only commits India formally to align its export rules and practices with those of the Nuclear Suppliers Group: it also opens the way for Indian participation in the Proliferation Security Initiative, and in efforts to guard against nuclear leakage. India's decision to support the majority in the International Atomic Energy Agency's recent vote to report Iran to the U.N. Security Council shows how important this enhanced nonproliferation posture can be.

The Energy Security Case

The agreement opens the way for India to meet its energy needs in ways that will advance long-term U.S. energy security goals. At present India gets only 2.6 percent of its electricity from nuclear power, but it is likely to increase this percentage at least ten fold in the next two decades. Even if it only gets part way toward this goal, this would be a significant reduction in its potential need for oil and gas, most of it now obtained from the Persian Gulf.

As more and more Indians drive automobiles, its demand for oil is rapidly growing. India will increasingly be competing with the United States and other consumers for petroleum from the Gulf and other sources. President Bush emphasized energy security in his press conference with Prime Minister Singh at the conclusion of his recent visit to India. "Congress has got to understand," he said, "that it is in our economic interest that India have a civilian nuclear power industry to help take the pressure offthe global demand for energy. Increasing demand for oil from America, from India and China, related to a supply that is not keeping up with the demand, causes our fuel prices to go up and so to the extent that we can reduce the demand for fossil fuels, it will help the American consumer. This is what I'll be telling our Congress."

The Global Warming Case

As India industrializes, its greenhouse gas emissions are steadily increasing, making it one of the world's major polluters, albeit far behind the United States. India, like China, argues that it is in a developmental stage, seeking to catch up with more advanced industrial powers, and cannot be held to the same standard as the developed countries in any global warming agreement. To the extent that India shifts away from fossil fuels, its negative impact on global warming will be reduced, and the prospects for international limitations on greenhouse gas emissions will improve.

To sum up, the arguments made against the agreement are outweighed by the arguments in its favor. Civilian nuclear cooperation with India will strengthen its political and economic stability; further U.S. strategic interests, U.S. non-proliferation goals and U.S. energy security, and help to combat the growing danger posed to mankind by global warming.

This letter reflects the personal views of the undersigned and does not represent the views of the institutions with which they are affiliated.

SELIG S. HARRISON, *Convenor*—Director, Asia Program,Center for International Policy; Senior Scholar, Woodrow Wilson International Center for Scholars

WALTER ANDERSEN—Associate Director, South Asia Studies School of Advanced International Studies Johns Hopkins University; Former Director for South Asia, Bureau of Intelligence and Research, Department of State; Former Special Assistant to U.S. Ambassador to India William Clark

GARY K. BERTSCH—Director, Center for International Trade and Security University of Georgia; University Professor of Public and International Affairs, University of Georgia

DANIEL BLUMENTHAL—Resident Fellow in Asian Studies, American Enterprise Institute; Former Senior Director, China, Taiwan, Mongolia, and Hong Kong, Office of the Secretary of Defense

MARSHALL BOUTON—President, Chicago Council on Foreign Relations; Former Director for Policy Analysis, Near East and South Asia, Department of Defense

HONORABLE RICHARD CELESTE—Former U.S. Ambassador to India; Former Governor of Ohio

HONORABLE WILLIAM CLARK—Former U.S. Ambassador to India; Former Assistant Secretary of State for East Asian and Pacific Affairs

STEPHEN P. COHEN—Senior Fellow, The Brookings Institution; Former Member, Policy Planning Council, Department of State

THOMAS DONNELLY—Resident Fellow in Defense and National Security, American Enterprise Institute; Member, U.S.-China Economic and Security Review Commission

AINSLEE EMBREE—Professor Emeritus of History and former Director of the Southern Asian Institute, Columbia University; Former Special Consultant to U.S. Ambassador to India Frank Wisner

HAROLD GOULD—Visiting Scholar, Center for South Asian Studies, University of Virginia

LEONARD G. GORDON—Senior Research Associate, Southern Asian Institute, Columbia University

FREDERIC GRARE—Visiting Scholar, Carnegie Endowment for International Peace; Former Counselor for Cooperation and Culture, Embassy of France, Islamabad, Pakistan

ROBERT M. HATHAWAY—Director, Asia Program, Woodrow Wilson International Center for Scholars; Former South Asia Specialist, Foreign Affairs Committee, U.S. House of Representatives

WALTER HAUSER—Professor Emeritus of South Asian History, University of Virginia

HONORABLE KARL F. INDERFURTH—Director, International Affairs Program Elliott School of International Affairs, George Washington University; Former Assistant Secretary of State for South Asian Affairs

ROBERT KAGAN—Senior Associate, Carnegie Endowment for International Peace; Former Member of the Policy Planning Staff, Department of State; Principal Speech Writer to Secretary of State George P. Shultz

HONORABLE DENNIS KUX—Senior Scholar, Woodrow Wilson International Center for Scholars; Former U.S. Ambassador to the Ivory Coast

EDWARD LUTTWAK—Senior Advisor, Center for Strategic and International Studies; Former Consultant, the Office of the Secretary of Defense, the National Security Council, the State Department, and the U.S. Army, Navy and Air Force

MCKIM MAMUOTT—Professor Emeritus of Anthropology, University of Chicago; Former Consultant, the Ford Foundation and the U.S. Embassy, New Delhi

THOMAS R. PICKERING—Senior Vice President for International Relations, The Boeing Company; Former Under Secretary of State for Political Affairs

HONORABLE JOHN B. RITCH—Director General, World Nuclear Association; Former U.S. Ambassador to the International Atomic Energy Agency; Former Staff Adviser on Nuclear Non-Proliferation and Arms Control, Senate Foreign Relations Committee

LLOYD RUDOLPH—Professor Emeritus of Political Science, University of Chicago; Former Chair, South Asian Studies and Chair, Committee on International Relations, University of Chicago

SUSANNE RUDOLPH—William Benton Distinguished Service Professor of Political Science Emerita, University of Chicago; Former Director, The Center for International Studies and Chair of the South Asia Center, University of Chicago

HONORABLE HOWARD SCHAFFER—Deputy Director, Institute for the Study of Diplomacy Georgetown University; Former U.S. Ambassador to Bangladesh

HONORABLE TERESITA C. SCHAFFER—Director, South Asia Program, Center for Strategic and International Studies; Former Deputy Assistant Secretary of State for Near East and South Asian Affairs; Former U.S. Ambassador to Sri Lanka

HONORABLE FRANK WISNER, Vice-President, American International Group; Former U.S. Ambassador to India

U.S. DEPARTMENT OF STATE,
WASHINGTON, DC. 20520,
April 27, 2006.

Hon. Richard G. Lugar, Chairman,
U.S. Senate, Committee on Foreign Relations

DEAR MR. CHAIRMAN: THANK YOU FOR YOUR QUESTIONS ON THE IMPACT OF THE U.S.-INDIA CIVILIAN NUCLEAR COOPERATION INITIATIVE IN THE CONTEXT OF CLIMATE CHANGE AND ENERGY PROBLEMS IN THE U.S. AND THE ADVANTAGES OF ENERGY PARTNERSHIPS WITH COUNTRIES LIKE INDIA. THE SECRETARY ASKED THAT I RESPOND TO THE QUESTIONS THAT YOU ASKED DURING HER RECENT TESTIMONY AT THE SFRC ON APRIL 5.

Greater access to civilian nuclear energy will help to meet India's growing demand for energy. India—with an economy growing at approximately 8 percent each year—has a rapidly growing appetite for energy. Huge population growth, expanding industrial production, economic development, urbanization, and increased motor vehicle ownership are all driving this energy demand. Between 1980 and 2001, demand increased by 208 percent. Only 2% of India's power generation needs are currently met by nuclear energy. India plans on investing in additional civilian nuclear reactors in order to expand this percentage to 20% by 2020, helping to meet the needs of its growing economy while reducing its reliance on fossil fuels. The U.S.-India Civilian Nuclear Cooperation Initiative will open up U.S.-India trade and in-

vestment in nuclear energy for the first time in three decades. It will also help meet India's energy needs in an environmentally friendly manner.

We view the U.S.-India Civilian Nuclear Cooperation Initiative and the rest of the U.S.-India Energy Dialogue as a process for strengthening India's total energy security. Our efforts to assist India in its effort to increase domestic energy production, reduce the environmental impact of energy production, transport and use, improve the efficiency of energy use, and develop energy technologies will ultimately work to strengthen India's energy security and meet its growing demand. I have attached a memorandum outlining in detail the various activities we are undertaking with India to resolve these urgent issues.

Diversifying India's energy sector will help to alleviate the competition among India, the United States, and other rapidly expanding economies for scarce carbon-based energy resources, thereby lessening pressure on global energy prices. Civil nuclear cooperation with India will help it meet its rising energy needs without increasing its reliance on unstable foreign sources of oil and gas, such as nearby Iran. An India that can meet its energy needs efficiently and rationally ultimately strengthens global and U.S. energy security.

The U.S. and India are cooperating on energy initiatives through five working groups: The Civil Nuclear Working Group, the Coal Working Group, the Power and Energy Efficiency Working Group, the Oil and Gas Working Group, and the New Technology and Renewable Energy Working Group. These DOE-led groups have been actively meeting since the formation of the U.S.-India Energy Dialogue in May 2005, and plan a full range of activities in the near term (enclosure).

The Coal Working Group has been meeting since July 2005 with several key goals: increased collaboration on clean fossil energy technologies; creating an attractive investment climate for domestic and foreign investment in the energy sector; and developing an efficient and environmentally sound energy infrastructure. India has the third largest reserves of coal in the world and coal remains the mainstay of India's energy sector, comprising 70% of their power generation capacity. Indian coal produces about twice as much ash and particulate matter, and emits far more nitrogen oxide (an element in photochemical smog) and carbon monoxide (a poisonous gas) than *American coal. India's agreement to take part in the FutureGen Project is important since the project will create the technology to produce a near-zero emissions coal-fired power plant that will produce hydrogen and sequester carbon dioxide underground, enabling greater use of coal in an environmentally sustainable way when the technology is eventually used in other coal-fired power plants.

Other initiatives to jointly research other forms of alternative energy like biofuels, solar and wind energy are also opportunities to expand the range of environmentally friendly technologies available to India. The President's Advanced Energy Initiative, announced during the State of the Union, highlights our own interest in pursuing expanded research in biofuels and solar energy. India is the fourth largest producer of wind power in world, with annual production of 4,300 megwatts. It hopes to expand this amount through more cooperation with the U.S. in mapping exercises and resource assessments. Our New Technology and Renewable Energy Working Group hopes to further promote dialogue on these technologies through cooperation with DOE's National Renewable Energy Laboratory. We also feel that U.S.-India cooperation through the Asia Pacific Partnership on Clean Development and Climate along with other countries in the region will promote the development of cleaner, cost-effective, and more efficient technologies. The expected reduction of greenhouse gases from the use of these technologies, cleaner coal emissions, and expanded use of civilian nuclear energy are positive steps for India, the U.S. and the global community.

The U.S.-India Energy Dialogue and the U.S.-India Civilian Nuclear Cooperation Initiative benefit the energy interests of both India and the United States. We hope this information is useful. Please do not hesitate to contact us if we can be of further assistance.

Sincerely,

JEFFREY T. BERGNER,
ASSISTANT SECRETARY, LEGISLATIVE AFFAIRS,

Enclosure: As stated.

FACT SHEET: U.S.–INDIA ENERGY COOPERATION

Under the U.S.-India Energy Dialogue, the United States and India are working together to meet the demands of rapid economic development and current population growth rates, both globally and within India, by increasing the availability

of sustainable energy resources. Initiatives under this dialogue seek to increase India's domestic energy production, reduce the environmental impact of energy production, transport and use, improve the efficiency of energy use, and develop both incremental and transformational energy technologies. The U.S. and India have pursued these energy initiatives through five main tracks: The Civil Nuclear Working Group, the Coal Working Group, the Power and Energy Efficiency Working Group, the Oil and Gas Working Group, and the New Technology and Renewable Energy Working Group. Listed below are the major outcomes of these working groups, and the highlights of key new initiatives:

1. FUTUREGEN

- India will join as an international partner for the FutureGen project to create a near-zero emissions coal-fired power plant that will produce hydrogen and sequester carbon dioxide underground, enabling greater use of coal in an environmentally sustainable way.
- India plans to participate in the Government Steering Committee of FutureGen and the FutureGen Industry Alliance. The Government of India will contribute $10 million to the project to join the government steering committee.
- The U.S. and India signed a framework agreement on FutureGen during President Bush's visit.

2. THE INTERNATIONAL THERMONUCLEAR EXPERIMENTAL REACTOR (ITER)

- In December 2005, the U.S. and its ITER partners, the European Union, Russia, Japan, South Korea and China, agreed to invite India as a full partner. The Indian government is making the agreed-upon contribution to the project for membership.
- American support was instrumental in ensuring the final agreement. The partnership represents the first tangible and concrete step towards greater cooperation between the USA and India in civilian nuclear energy.

3. THE INTEGRATED OCEAN DRILLING PROGRAM

- India and the U.S. will work toward India's membership in the Integrated Ocean Drilling Program (IODP), a scientific research program conducting ocean sediment sampling and monitoring.
- ndia has leased the ocean research ship Aides Resolution for a three-month expedition to study gas hydrates beginning in March 2006. DOE owns specialized equipment on this ship that Indians would like to use.
- Because the Indian hydrate expedition and follow-on studies will include many U.S. research scientists, our involvement will accelerate commercial production of U.S. hydrates. Therefore, DOE has facilitated the export authorization for use of the equipment.

4. INCREASED ENERGY COOPERATION

The Civil Nuclear Working Group

- A Joint Technical workshop was held January 9-12, 2006 in Mumbai, India. The purpose of the January workshop was to advance dialogue and cooperation between the United States and India on technical issues associated with civilian nuclear energy. A second workshop will likely take place in the U.S. during 2006.

Power and Energy Efficiency Working Group

- U.S.-India Energy Efficiency Conference will take place early May 2006 in India. The focus of the conference will be on industrial and building energy efficiency.
- A proposed strategic partnership between India's National Thermal Power Corporation and the U.S. Department of Energy's National Energy Technology Laboratory will work to advance research and development of clean and efficient power generation.
- USAID recently launched a public-private partnership with the General Electric Company (GE) to increase access to clean and affordable energy services in rural communities in India. The partnership will span a two-year period and provide up to four communities in India with access to clean energy.

- A Clean Coal Business Development Council will likely be launched during the Clean Coal Summit in July 2006.
- A workshop is planned in India in May 2006 to discuss the results of a study supported by USAID on the feasibility of Integrated Gas Combined Cycle (MCC) power plants in India.
- Continued cooperation on energy efficient buildings and on the development of building codes. A U.S. team is expected to conduct training in India in March/April 2006.
- The Distribution Reform Upgrades and Management program has completed detailed project reports on four model projects an efficient power distribution in the states of Karnataka, Maharashtra, Gujarat and Delhi.
- The development of a graduate degree program in.power distribution management is currently underway.

Coal Working Group

- Establishment of a Business Advisory Council to serve as a resource to the CWG, consisting of representatives from business, industry, academia and other non-governmental organizations.
- Workshop in India in April 2006 to discuss investment opportunities, particularly in the areas of exploration, coal beneficiation, and power generation.
- Planning underway to have information/technical expertise exchanges between U.S. and India, as well as the potential for pilot projects in India in the areas of underground coal gasification; coal liquefaction; coal mine reclamation; and coal beneficiation/coal washeries.
- The U.S. Trade and Development Agency (USTDA) has provided a $360,000 Feasibility Study grant for the Neyveli coal mine expansion project.

Oil and Gas Working Group

- A joint conference on natural gas, including coal bed methane (CBM) and involving the business community, is currently being planned for May 2006 in New Delhi.
- A Memorandum of Understanding (MOU) on Energy Information Exchange between U.S. Energy Information Administration (EIA)—Ministry of Petroleum and Natural Gas (MPNG) was signed on February 9, 2005.
- A MOU between the U.S. Minerals Management Service and India's Oil Industry Safety Directorate is expected to be signed soon.
- A MOU between the U.S. Geological Survey and MPNG's Directorate General for Hydrocarbons is expected to be signed.
- The USTDA and U.S. Environmental Protection Agency are working with the Government of India to establish of a CBM Clearinghouse.
- USTDA is working with the Government of India to finalizing a grant for a limited feasibility study of a national pipeline grid.

New Technology and Renewable Energy Working Group

Several areas have been identified for potential cooperation on research and development. Potential collaborations include:

- The Indian Oil Company (IOC) has proposed a MOU with DOE's National Renewable Energy Laboratory (NREL) on hydrogen.
- NREL has also proposed collaborative projects with IOC on biofuels, including joint research and information sharing focus on biodiesel fuels and production.
- The Indian Ministry of Non-Conventional Energy Sources (MNES) and NREL are looking into joint research projects on solar thermal power generation, low wind speed technology research & development, renewable energy resource assessment and use of resource data in relevant analysis tools.

Excerpt From CRS Memorandum, "Assessment of Potential Benefits of U.S. Civil Nuclear Cooperation With India"[1]

POTENTIAL BENEFITS FOR GLOBAL ENERGY MARKETS, THE ENVIRONMENT, AND U.S. BUSINESS INTERESTS[2]

Because India is not a signatory to the Nuclear Nonproliferation Treaty and has used its nuclear power program to develop nuclear weapons, the United States and other nuclear supplier nations have restricted India's access to foreign nuclear technology and materials since the early 1970s. As a result, India's nuclear power program has relied on indigenous heavy water reactor designs based on small, imported reactors that were supplied before the international cutoff. India had set a goal of 10,000 megawatts of nuclear generating capacity by 2000,[3] but by 2005 only 2,550 megawatts of nuclear capacity was on line.[4]

Proponents of the U.S.-India nuclear cooperation proposal contend that allowing India to import U.S. reactors would allow India's nuclear generating capacity to expand much more rapidly: "The agreement also is good for the American economy because it will help meet India's surging energy needs—and that will lessen India's growing demand for other energy supplies and help restrain energy prices for American consumers," according to a White House statement.[5] Secretary of State Condoleezza Rice has also contended that the proposed nuclear agreement could significantly reduce India's projected carbon dioxide emissions and create U.S. jobs related to reactor exports to India.[6]

The extent to which the U.S.-India nuclear agreement would help restrain U.S. energy prices and reduce CO_2 emissions would depend primarily on the amount of new Indian nuclear generating capacity resulting from the agreement and the amount of Indian fossil fuel consumption displaced by any such nuclear capacity. U.S. job creation would additionally depend on the ability of U.S. reactor vendors to compete with foreign suppliers for Indian contracts and the U.S. content of any resulting reactor projects. The White House has not yet provided a detailed analysis to support its contentions about the potential energy, environmental, and economic benefits of the proposed nuclear agreement. As indicated by the following discussion, the energy benefits to U.S. consumers are likely to be negligible for at least the next 20 years, although longer-term benefits could be significant under some imaginable scenarios. Any exports of U.S. reactors to India would almost certainly create U.S. jobs, although the magnitude of such employment growth is difficult to estimate.

A recently released draft of India's first Integrated Energy Policy calls for India to order 6,000 megawatts of foreign-supplied nuclear generating capacity (six or seven large commercial reactors) during the next ten years, in addition to a two-reactor Russian nuclear power plant already under construction. The draft plan calls for Indian nuclear capacity to reach 9,000–11,000 megawatts in 2010, 21,000–29,000 megawatts in 2020, and double each decade thereafter through 2050. The upper range of the projections assumes imports of technology and nuclear fuel.[7]

Far more modest nuclear growth is predicted by the International Energy Agency (IEA), which estimates that India's nuclear generating capacity will reach 6,000 megawatts in 2010, 9,000 megawatts in 2020, and 14,000 megawatts in 2030.[8] Given India's past shortfalls in meeting its nuclear power targets, the IEA projections may be more realistic than those in the Indian energy plan. However, because the IEA estimates were issued in 2004, they do not consider any potential boost from reactor imports.

Even if legal barriers to nuclear sales to India were lifted, the potential difficulty in financing such sales would pose a significant obstacle to Indian nuclear power expansion. Nuclear power plants are far more capital-intensive than competing tech-

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[1] Memorandum prepared by the Congressional Research Service, K. Alan Kronstadt (Coordinator), Sharon Squassoni (Foreign Affairs, Defense, and Trade Division), and Mark Holt (Resources, Science, and Industry Division), March 29, 2006

[2] This section written by Mark Holt, Specialist in Energy Policy, Resources, Science, and Industry Division.

[3] "Datafile: India." *Nuclear Engineering International.* Feb. 1995. p. 17.

[4] "World List of Nuclear Power Plants." *Nuclear News.* Mar. 2005.

[5] The White House. Office of the Press Secretary. "India Civil Nuclear Cooperation: Responding to Critics." Mar. 8, 2006.

[6] Rice, Condoleezza. "Our Opportunity With India." *Washington Post.* Mar. 13, 2006. p. A15.

[7] Saraf, Sunil. "Indian Energy Policy Stresses Indigenous Nuclear Development." *Nucleonics Week.* Jan. 26, 2006. p. 8.

[8] International Energy Agency. *World Energy Outlook 2004.* p. 500.

nologies; the higher construction costs are supposed to be recouped by lower fuel and other operating costs. However, the overall economic viability of nuclear power has been inconsistent throughout the world, and worldwide nuclear growth has been slow since the 1980s. The relatively few nuclear power plants that have been completed in recent years have experienced such a wide variety of construction circumstances and are of so many designs and sizes that no clear track record on capital costs has been demonstrated. Costs reported in the news media for reactors completed since 2000 range from less than $1,000 per kilowatt of capacity for Russia's Rostov 1[9] to about $4,400 per kilowatt for Brazil's Angra 2.[10] Costs toward the lower end of that range will probably be necessary for a worldwide resurgence in nuclear power plant construction.

In the United States, no commercial reactors have been ordered since 1978 (and all orders since 1973 have been cancelled). About a dozen nuclear power plants are currently under consideration in the United States, but the Energy Information Administration calculates that new reactors would not be financially feasible without tax credits provided by the Energy Policy Act of 2005 (P.L. 109–58).[11]

Nuclear power's relatively high up-front costs, in addition to hindering nuclear energy expansion throughout the world, pose particular problems for India. IEA estimates that India will need to invest $665 billion in its electricity sector over the next 30 years and concludes, "Given the extremely poor financial situation of the Indian power sector, the availability of the necessary finance remains very uncertain." Most Indian power plants are government-owned, with about two-thirds owned by State Electricity Boards (SEBs). Revenues to the SEBs cover only about 70% of their costs, and about 40% of their revenues come from subsidies. Power theft, non-billing, and non-payments are widespread.[12]

Private-sector financing in India remains problematic as well. India opened the electricity sector to independent power producers (IPPs) in 1991, but ten years later only 10,000 megawatts of such capacity had been constructed. According to IEA, "The time and effort required to develop new IPP projects in India proved too great for some foreign investors, and many reduced their Indian exposure. Among recurring difficulties are the lack of prior clearance of the projects by the authorities, problems in securing fuel supply agreements and the bankruptcy of the SEBs."[13] The relatively high up-front risk of nuclear generation would appear to make private-sector financing especially difficult for Indian nuclear projects, although some interest has recently been expressed by Indian firms.[14]

Nuclear power in India is currently owned and operated by the central government through the Nuclear Power Corporation of India Ltd. (NPCIL). Because of the financing obstacles facing the SEBs and private sector, it appears likely that nuclear power expansion in the foreseeable future would have to continue to be undertaken by the central government. However, some Indian industry observers have questioned whether NPCIL has the resources to expand India's nuclear capacity at the rate envisioned by India's draft energy plan without private-sector assistance.[15]

If a U.S.-India nuclear cooperation agreement is implemented and adequate financing for new nuclear power plants can be arranged, any resulting energy and environmental benefits would not be realized immediately. Reactor projects currently under consideration in the United States are expected to require at least ten years of design, licensing, and construction before operation can begin.[16] For Indian reactors, additional time would probably be needed to negotiate a deal, including price, financing, and local content and technology transfer requirements. After China began serious negotiations in 1984 for its first foreign reactors, from France, the first two units began operating in 1994, and four additional foreign-supplied reactors have been completed since.[17] (Two Russian-supplied reactors are currently under construction, and China is expected to soon award foreign contracts for four

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[9] Weekly Business Report, Mar. 13, 2001; Interfax, July 1, 1999 (from Nuclear Threat Initiative web site, www.nti.org).

[10] Dow Jones, July 14, 2000.

[11] Energy Information Administration, *Analysis of Five Selected Tax Provisions of the Conference Energy Bill of 2003,* Feb. 2004.

[12] International Energy Agency. *World Energy Investment Outlook 2003.* p. 388.

[13] International Energy Agency. *Electricity in India: Providing Power for the Millions.* 2002. p. 25.

[14] AsiaPulse. "India's Tata Group Expresses Interest in Nuclear Power." Mar. 6, 2006.

[15] Hindu Business Line. "India Nuclear Power Generation Sector." Mar. 3, 2006.

[16] Weil, Jenny, and Margaret Ryan. "New Plants Entice Utilities, Investors, But Risks Loom Large." *Nucleonics Week.* Feb. 16, 2006. p. 1.

[17] MacLachlan, Ann. "Framatome and Chinese Sign Letter of Intent for Daya Bay Units." *Nucleonics Week.* Mar. 20, 1986. p. 1; "World List of Nuclear Power Plants." *Nuclear News. Mar.* 2005.

more nuclear units.) A case could be made that India's nuclear program might follow a similar pace.

If India began operating six new commercial reactors by 2025 resulting from the U.S.-India nuclear cooperation agreement, the additional nuclear generating capacity would total about 7,200 megawatts (about 1,200 megawatts each). Any additional Indian nuclear power capacity would be expected to displace some of the growth that would otherwise have taken place in electricity generation fueled by coal, natural gas, and oil. IEA projects that by 2025, coal-fired generating capacity will grow by 94,000 megawatts, natural gas-fired capacity will grow by 45,000 megawatts, and oil-fired capacity will grow by 7,000 megawatts.[18]

IMPACT ON OIL AND NATURAL GAS CONSUMPTION

If U.S.-supplied reactors displaced those three fuels in proportion to their expected growth, then the displacement would be 4,636 megawatts of coal-fired capacity, 2,219 megawatts of natural gas-fired generation, and 345 megawatts of oil-fired generation. India's projected natural gas consumption in 2025 would be reduced by 119 billion cubic feet per year and annual oil consumption reduced by 2.9 million barrels.

With world oil consumption projected to reach 119 million barrels per day by 2025,[19] the reduction in India's oil consumption calculated above would have little or no impact on world oil markets. The calculated natural gas reduction would also be a small proportion of the projected world annual total consumption of 156 trillion cubic feet by 2025. Natural gas prices are currently set primarily in regional markets, but it is possible that by 2025 a world market could develop and that Indian imports could directly affect U.S. prices (although not the small amount of gas in the calculation above).

POTENTIAL CO_2 REDUCTIONS[20]

The 7,200 megawatts of displaced fossil-fuel generating capacity estimated above would have produced about 37 million metric tons of carbon dioxide per year. Carbon dioxide reductions of 37 million metric tons per year would be similarly small in comparison to total worldwide carbon dioxide emissions. However, such reductions would constitute 2% of India's current annual CO_2 emissions and 3.6% of India's current energy-related emissions,[21] which could help India meet future reduction goals that might be required by international agreements.

If faster nuclear growth than described above were assumed, the displacement of fossils fuels and carbon dioxide emissions would increase proportionately. Future advances in technology, such as commercially viable electric vehicles or vehicles powered by hydrogen from nuclear reactors, could further increase nuclear power's potential displacement of oil consumption in the long run. However, the timing and possible commercial impact of such technologies remains highly speculative.

NUCLEAR JOB CREATION IN THE UNITED STATES

The number of U.S. jobs that might result from the proposed India agreement would depend on the number of reactors imported by India (which, as noted above, may be limited by available financing), the ability of U.S. reactor vendors to compete with foreign suppliers for any such orders, and the U.S. content of any reactors supplied by U.S. vendors.

Secretary Rice's *Washington Post* article cited above contends that even if India ordered only two U.S. reactors, "it will mean thousands of new jobs for American workers." However, even such a minimal order is far from guaranteed, as shown by the U.S. experience with China, which has ordered no U.S. reactors since a U.S.-China nuclear cooperation agreement was implemented in 1997. China is considering a proposal for four reactors by Pittsburgh-based Westinghouse Electric Company, which is currently owned by British Nuclear Fuels Ltd. (BNFL) and being sold to the Japanese conglomerate Toshiba. However, Westinghouse faces strong competition for the order from the French supplier Areva, which has already built four reactors in China.

U.S. reactor vendors (Westinghouse and General Electric Co.) might face a competitive disadvantage in India if the Nuclear Suppliers Group allows sales to India before a U.S.-India nuclear cooperation agreement can be implemented under sec-

[18] IEA, *World Energy Outlook 2004.* p. 500. (Average of 2020 and 2030 capacity projections.)

[19] Energy Information Administration. *International Energy Outlook 2005.* p. 93.

[20] Carbon dioxide emissions analysis prepared by Larry Parker, Specialist in Energy Policy, Resources, Science, and Industry Division.

[21] World Resources Institute. *Climate Analysis Indicators Tool.* [cait.wri.org].

tion 123 of the Atomic Energy Act (42 U.S.C. 2153). Analysts have also noted that India has not signed any international nuclear liability agreements, a situation that could put private-sector U.S. reactor vendors at a further disadvantage against competitors owned by foreign governments, such as Areva and Russia's Atomstroy Export, although BNFL is also government-owned.[22]

If U.S. firms do receive future reactor orders from India, many of the components and services related to such orders would probably be procured from non-U.S. sources. Westinghouse has stated that the largest reactor components for its proposed sale to China would be foreign-supplied, although design, instrumentation and control, and other U.S.-supplied portions of the four-reactor deal would support 5,000 U.S. jobs.[23] General Electric contends that the U.S. content in two reactors the company is currently building in Taiwan totals more than 60%.[24]

Another factor is that, over time, the Indian content of nuclear power plants imported by India would probably increase, because a major element of such import deals is usually technology transfer. For example, Areva's original reactor technology was licensed from Westinghouse, and Japan and South Korean reactors are based on U.S. designs as well. Much of the cost of even the first nuclear power plants ordered by India would be expected to go toward Indian materials, labor, and non-nuclear components.

A U.S.-India nuclear agreement would open up other potential business besides reactor sales, possibly increasing the deal's impact on U.S. jobs. Contracts related to nuclear fuel, maintenance, and other services could potentially be signed by U.S. firms or foreign firms with U.S. nuclear operations.

According to the U.S. Chamber of Commerce, "India's nuclear power requirements are projected to generate as many as 27,000 high quality jobs each year for the next ten years in the U.S. nuclear industry alone." However, given the uncertainties discussed above, that estimate appears to be highly optimistic.

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[22] Poe, Sheryll. "Non-Proliferation Advocates Question Trade Benefits of India Nuke Deal." *Inside U.S. Trade.* Mar. 24, 2006.

[23] Wald, Matthew L. "U.S. Loans for Reactors in China Draw Objections." *New York Times.* Feb. 28, 2005.

[24] E-mail communication from Rob Wallace, GE Energy, Feb. 15, 2006.

Material Inserted Into the Record by Senator Boxer

NUNN URGES CONGRESS TO SET CONDITIONS ON U.S.-INDIA NUCLEAR PACT [1]

BY GLENN KESSLER, WASHINGTON POST STAFF WRITER

In a setback for the administration's efforts to win approval of a landmark nuclear pact with India, former senator Sam Nunn said yesterday that he has serious concerns the deal would harm the "United States' vital interest" in preventing nuclear proliferation and urged Congress to set conditions for its support.

"Congress has a duty to look at the broader framework," Nunn, a moderate and highly respected Georgia Democrat who still has broad influence in both parties on proliferation and military matters, said in an interview. "If I were still in Congress, I would be skeptical and looking at conditions that could be attached."

Undersecretary of State R. Nicholas Burns warned lawmakers last week that congressionally mandated conditions could cause the agreement to unravel. He and other administration officials say the agreement is a groundbreaking achievement that will bring India, which has not signed the nuclear Non-Proliferation Treaty, into the nonproliferation mainstream, while bolstering U.S.-India ties and adding jobs to the U.S. economy.

But Nunn, who was briefed on the deal by State Department officials last week, said he is concerned it would lead to the spread of weapons-grade nuclear material, unleash a regional arms race with China and Pakistan, and make it more difficult for the United States to win support for sanctions against nuclear renegades such as Iran and North Korea. Nunn is a board member of General Electric Co.—which built nuclear power reactors in India before New Delhi conducted its first nuclear test in 1974—but he said he thinks the economic benefits are overstated.

The administration last week proposed legislation that would exempt India from sections of the Atomic Energy Act that restrict trade with countries that are not party to nuclear treaties. The proposal already faces an uphill battle in Congress, where key lawmakers such as Sen. Richard G. Lugar (R-Ind.), chairman of the Senate Foreign Relations Committee, and Rep. Henry J. Hyde (R-Ill.), chairman of the House International Relations Committee, have remained neutral. The administration has actively sought, without much success, the support of moderate opinion leaders such as Nunn.

Under the pact, India is to separate its civilian and military nuclear programs over the next eight years to gain U.S. expertise and nuclear fuel to meet its rapidly rising energy needs. India's civilian facilities would be subject for the first time to permanent international inspections, but the agreement does not require oversight of India's prototype fast-breeder reactors, which can produce significant amounts of weapons-grade plutonium when fully operational.

The Bush administration originally sought a plan that would have allowed India to continue producing material for six to 10 weapons each year, but the new plan would allow India enough fissile material for as many as 50 weapons a year. Experts said this would far exceed what is believed to be its current capacity.

Nunn said that among the conditions he would attach to the legislation is the requirement it could not take effect until the president certifies that India pledges not to produce nuclear materials, such as plutonium or highly enriched uranium, for weapons. The current agreement "certainly does not curb in any way the proliferation of weapons-grade nuclear material," Nunn said.

"India was a lot better negotiator than we were," Nunn asserted. While the administration has said it has no intention of aiding India's nuclear weapons program, "the reality could be the opposite," he said. "The administration has a high burden to explain this."

Nunn added that suggestions by some former and current administration officials that it might be in the United States' interest to allow India to build up its strategic capabilities is "totally counterproductive and dangerous reasoning."

Nunn, who served in the Senate for 24 years, is co-chairman and chief executive of the Nuclear Threat Initiative, a nonprofit organization that seeks to reduce the global threats from nuclear, biological and chemical weapons. Lugar is also a board member of NTI, and the two men wrote the Nunn-Lugar Act, which has helped destroy thousands of nuclear warheads in the former Soviet Union.

In an interview published yesterday in the Indianapolis Star, Lugar said he might favor the legislation if he were convinced that the new relationship was in the United States' best interests, that there were "considerable if not complete" safe-

[1] Copyright 2006 *The Washington Post,* March 21, 2006

guards on the spread of nuclear fuel and that it would lead to a reduction of oil consumption.

The U.S. Chamber of Commerce has vowed an all-out push to win approval of the agreement, saying it would be a boon for U.S. business. But it has also sparked a backlash from nonproliferation experts who believe it will lead to the unraveling of the Non-Proliferation Treaty, which sought to limit the number of nuclear weapons states. "Nunn's voice carries weight," said Henry D. Sokolski, executive director of the Nonproliferation Policy Education Center and a Pentagon official in the George H.W. Bush administration, who opposes the agreement. "We have waited for a moderate, respected voice to speak clear sense on these matters. Now that he's spoken, it would be very strange if Congress doesn't listen."

ISSUES AND QUESTIONS ON JULY 18 PROPOSAL FOR NUCLEAR COOPERATION WITH INDIA

November 18, 2005

U.S. House of Representatives,
Washington, DC.

DEAR MEMBER OF CONGRESS, We are writing to urge you and your colleagues to critically examine the July 18 proposal to allow for "full" U.S.-Indian civilian nuclear cooperation, which would require significant changes to U.S. nonproliferation laws and longstanding international nonproliferation policy that have been supported and advanced by past Republican and Democratic administrations.

We believe that the United States and India can and should expand their ties and common interests as free democracies through expanded cooperation in trade and human development, scientific and medical research, energy technology, humanitarian relief, and military-to-military contacts. In addition, both the United States and India have a vital interest in reducing the global dangers posed by nuclear weapons through effective nonproliferation and disarmament endeavors.

Unfortunately, the proposal for civil nuclear cooperation with India poses far-reaching and potentially adverse implications for U.S. nuclear nonproliferation objectives and promises to do little in the long-run to bring India into closer alignment with other U.S. strategic objectives.President Bush pledged to seek changes in the Atomic Energy Act (AEA) of 1954 as amended by the 1978 Nonproliferation Act, which bars civilian nuclear cooperation with non-nuclear-weapon states as defined by the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) that do not allow full-scope IAEA safeguards. This includes India. The President also pledged to seek changes to relevant Nuclear Suppliers Group (NSG) guidelines, which make full-scope safeguards a condition of civil nuclear cooperation with non-nuclear-weapon states as defined by the NPT—a U.S. policy objective adopted by NSG consensus during the George H. W. Bush administration.

We have read the statements of the President and administration officials concerning the proposed agreement, but key details needed to help the Congress fully understand the implications of the proposal, in our view, have not yet been provided. Accordingly, we urge that before any action is taken on any legislation sent up by the administration to implement the proposal, Congress should obtain detailed answers to a number of questions. (See attached list.)

Based on what is known, the nonproliferation benefits of the July 18 proposal are vastly overstated by its proponents and the damage to the nonproliferation regime is potentially very high. Contrary to assertions by the administration, the current proposal would not bring India sufficiently into conformance with nonproliferation behavior expected of responsible states.

So far, India has pledged only to accept voluntary safeguards over "civilian" nuclear facilities of its choosing. This could allow India to withdraw any nuclear facility from (IAEA) safeguards for national security reasons. Such an arrangement would be purely symbolic and would do nothing to prevent the continued production of fissile material for weapons by India.The supply of nuclear fuel to India would free-up its existing stockpile and capacity to produce highly enriched uranium and plutonium for weapons. To help ensure that U.S. civilian nuclear cooperation is not in any way advancing India's weapons program, it would be essential to apply permanent, facility-specific safeguards on a mutually agreed and broad list of current and future Indian nuclear facilities involved in civilian activities and electricity production in combination with a cutoff of Indian fissile material production for weapons.

Unfortunately, the communiqué does not call for any additional measures that would constrain India's nuclear arsenal. Specifically, civilian nuclear assistance should not be extended to India until it implements a cessation of the production of fissile material for weapons, which has been adopted by the five original nuclear-weapon states.

In the July 18 communiqué India also pledged to a set of export control measures that it had already committed to or is obligated to pursue under UN Security Council Resolution 1540.

The proposed arrangement could also trigger a significant erosion of the guidelines of the 45-member NSG, which are an important barrier against the transfer of nuclear material, equipment, and technologies for weapons purposes. No civilian assistance should be extended to India without the full concurrence of the NSG and approval of India's safeguards agreement with the IAEA.

Non-nuclear-weapon states have for decades remained true to the original NPT bargain and forsworn nuclear weapons and accepted full-scope IAEA safeguards in return for access to peaceful nuclear technology under strict and verifiable control. Many of these states made this choice despite strong pressure to spurn the NPT and pursue the nuclear weapons path. They might make a different choice in the future if non-NPT members receive civil nuclear assistance under less rigorous terms. The proposed civil nuclear cooperation arrangement may also undermine our ability to win necessary international support for persuading Iran to abandon its fuel cycle plans and to make its nuclear program fully transparent to the IAEA.

On balance, India's commitments under the current terms of the proposed arrangement do not justify making far-reaching exc eptions to U.S. law and international non proliferation norms.

We urge you to consider the full implications of the proposed agreement for cooperation between the United States and India, and pursue additional stipulations that might result in a positive outcome to U.S. and international security. Congress must also ensure it retains the authority to review whether the terms of any such arrangement are being implemented and take appropriate action if they are not.

Building upon the already strong U.S.-Indian partnership is an important goal, and we remain convinced that it can be achieved without undermining the U.S. leadership efforts to prevent the proliferation of the world's most dangerous weapons.

Sincerely,

HAL BENGELSDORF—Consultant, and former Director of the Office for Nonproliferation Policy at the Energy Department and former Office Director for Nuclear Affairs at the State Department

AMB. GEORGE BUNN—Consulting Professor, Stanford University Center for International Security and Cooperation; First General Counsel for the Arms Control and Disarmament Agency and negotiator of the NPT

JOSEPH CIRINCIONE—Senior Associate and Director of the Nonproliferation Project, Carnegie Endowment for International Peace

ROBERT J. EINHORN—Senior Adviser, Center for Strategic and International Studies; former Assistant Secretary of State for Nonproliferation

LT. GEN. ROBERT GARD, USA (RET.)—Senior Military Fellow, Center for Arms Control and Non-Proliferation

VICTOR GILINSKY—Energy Consultant, and former U.S. Nuclear Regulatory Commissioner

AMB. THOMAS GRAHAM JR.—Chairman, Cypress Fund for Peace and Security, and former Acting Director of the Arms Control and Disarmament Agency

AMB. ROBERT GREY—Director, Bipartisan Security Working Group, and former U.S. Representative to the Conference on Disarmament

JOHN HOLUM—former Undersecretary of State for Arms Control and International Security Affairs and former director of the Arms Control and Disarmament Agency

DARYL G. KIMBALL—Executive Director, Arms Control Association

LAWRENCE KORB—Senior Fellow, Center for American Progress, and former Asst. Secretary of Defense for Manpower, Reserve Affairs, Installations and Logistics

PAUL LEVENTHAL—Founding President of the Nuclear Control Institute, and former Special Counsel of the U.S. Senate Committee on Government Operations

FRED MCGOLDRICK— 1Consultant, and former Director of Nonproliferation and Export Policy at the State Department

KELLY MOTZ—Associate Director, Wisconsin Project on Nuclear Arms Control

HENRY S. ROWEN—Professor of Public Policy and Management emeritus,Graduate School of Business, Senior Fellow, the Hoover Institution Stanford University, and former Assistant Secretary of Defense for International Security Affairs

LAWRENCE SCHEINMAN—Distinguished Professor at the Center for Nonproliferation Studies, and former Assistant Director of the Arms Control and Disarmament Agency

HENRY SOKOLSKI—President, Nonproliferation Education Policy Center, and former Deputy for Nonproliferation Policy in the Office of the Secretary of Defense

LEN WEISS—Consultant and former Staff Director of the U.S. Senate Committee on Governmental Affairs

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KEY ISSUES FOR CONSIDERATION ON PROPOSED NUCLEAR COOPERATION WITH INDIA

We cannot overestimate the long-term unintentional damage that could be done to the world's nonproliferation effort if the current proposal is allowed to go through as is without a complete vetting of its possible consequences.

Accordingly, we urge that before any action is taken on any legislation sent up by the administration to implement the proposal, Congress should obtain from the administration detailed answers to a number of questions.

These include:

1. How reliable is India as a nuclear trading partner based on its past record and how might the proposed deal affect efforts to stop trade to and from states of concern?

   a. Is there any prospect that there could be a negative impact on attempts to stop Iran and North Korea from obtaining assistance for their nuclear programs?

   b. How will assistance to Pakistan's nuclear program by China and others be affected by this proposal if implemented?

   c. Is there any evidence of Indian violations since 1998 of U.S. and other export laws involving nuclear weapons related technology and/or delivery systems, including missiles?

   d. To what extent might the current proposal stimulate China's and Pakistan's production of nuclear weapons or nuclear weapons material?

   e. How effective are India's nuclear and missile export laws and enforcement capabilities vis-à-vis those of the NPT nuclear-weapon states and the requirements of Resolution 1540?

2. Will the delivery of U.S. technology or nuclear fuel for the reactors in India free-up indigenous Indian nuclear fuel for its weapons program?

   a. Could such an action damage the NPT and our ability to help enforce compliance with it?

   b. What verifiable restrictions on India's use of its own fuel will the United States insist upon?

   c. Will the U.S. insist on case-by-case consent rights or rights of disapproval on reprocessing and enrichment and retransfers of U.S. origin items?

   d. Is the administration considering the transfer of uranium enrichment or reprocessing technology to India as part of the U.S.-Indian accord?

3. What kind of IAEA safeguards will be applied to Indian civilian nuclear facilities?

   a. Will they be INFCIRC 66 Rev.2 safeguards which are applied in perpetuity?

   b. If other safeguards are contemplated that are not permanent, how would they prevent the diversion of civilian materials or technologies to weapon use once the putative U.S.-India agreement expires or is otherwise terminated?

   c. Will India be allowed to withdraw a civilian facility from safeguards and declare it a military facility?

   d. What criteria would be used by the U.S. government to determine which nuclear facilities and materials should be subject to safeguards?

   e. How much additional funding will the IAEA need in order to meet the additional safeguards requirements?

4. How will the United States verify Indian nonproliferation commitments beyond safeguards under the proposed agreement?

a. Will the U.S. be able to determine independently which Indian facilities are civilian and which are military? If not, how will we know whether India's declaration is appropriate?

b. What mechanisms are in place to monitor Indian implementation of its export laws, and how long would it take to ensure that the appropriate Indian laws are in place and are working effectively?

5. Does the administration consider India's 1974 nuclear explosion in which U.S. heavy water was used in the production of the bomb's plutonium a violation of the sale agreement between India and the United States? If so, does India agree with our interpretation of that agreement? If they don't, how can we assure that similar disagreements won't happen with the current proposal? Should the proposal be amended to provide for return of all delivered materials in the event of such a disagreement?

6. Both U.S. and Indian spokesmen have referred to a "phased" approach to implementation of the proposal if approved. If so, what are the steps and what is the sequence? Is the U.S. government working on a plan with a timetable that would phase in our cooperation with India in accordance with India's meeting its obligations?

7. Has the administration obtained any evidence of Pakistani, Israeli, or North Korean interest in civilian nuclear cooperation on terms similar to those proposed for India. What is the argument for doing this favor for India and not for these other states? How will the administration respond if other states, like China or Russia, seek exemptions for their preferred political or commercial partners?

8. What specific proposals, if any, has the U.S. discussed with NSG partners to alter its guidelines so that civilian nuclear trade with India might proceed and what are the specific reactions of other NSG members? Will the administration proceed with "full" civil nuclear cooperation with India if the NSG does not unanimously support such an exception to NSG rules for India? How will the proposed rule changes relating to India affect President Bush's proposal to the NSG to make the Additional Protocol a condition of supply?

These questions suggest that the proposal by the administration requires much more discussion and examination before any legislative action is taken.

MANY SKEPTICAL EYES ARE ON U.S.-INDIA NUCLEAR DEAL; CONGRESS, CRITICS WANT ANSWERS ABOUT THE RISKS[1]

BY: BARBARA SLAVIN

WASHINGTON—The Bush administration's plan to sell nuclear technology to India for the first time in three decades is under scrutiny from lawmakers on Capitol Hill and critics who say the deal will increase the risk that dangerous materials will spread.

Secretary of State Condoleezza Rice is to testify today before both houses of Congress in support of the deal, finalized last month when President Bush was in New Delhi.

"The intention is to do due diligence, and there are a lot of questions members want answered," said Rep. Henry Hyde, R-Ill., chairman of the House International Relations Committee.

Senate Foreign Relations Committee Chairman Richard Lugar, R-Ind., suggested that Congress is in no hurry to move. "I believe that we have only scratched the surface of this intricate agreement and the national security questions it has raised," he said in a statement.

Rep. Tom Lantos of California, the ranking Democrat on the House International Relations Committee, said the administration has not yet given Congress details of how it intends to cooperate with India's nuclear industry.

The administration is requesting an exception to a 1954 law that bans U.S. nuclear cooperation with any country that has not allowed the International Atomic Energy Agency (IAEA), the United Nations' nuclear watchdog, to monitor all its nuclear facilities.

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[1] Copyright 2006, Gannett Company, Inc., All Rights Reserved, *USA TODAY,* April 5, 2006

The Bush administration has portrayed the deal as a major breakthrough for U.S.-India relations and for global efforts to stop nuclear proliferation. If Congress approves, the United States would end a three-decade embargo on selling nuclear technology to India. India exploded a nuclear device in 1974 that it had developed under the guise of a civilian program. Under the U.S.-India agreement, India would separate its civilian and military nuclear facilities and let the IAEA inspect civilian sites.

"We are far better off working with the Indians and having the IAEA place safeguards on India's civil nuclear program than we are if India is isolated," Undersecretary of State Nicholas Burns, the prime negotiator of the deal, said recently. Burns said the deal will cement a strategic relationship with the world's most populous democracy.

Critics say the agreement could encourage the spread of nuclear technology.

Seven proliferation experts led by Henry Sokolski, executive director of the Nonproliferation Policy Education Center in Washington, sent a letter Tuesday to the chairmen and ranking members of the Senate and House foreign relations committees urging Congress not to approve the deal until the administration "has specified what further steps it is planning to take" to ensure that the agreement does not increase proliferation risks.

David Albright, a former IAEA inspector who now heads the Institute for Science and International Security, a Washington think tank, said his institute has documented worrisome Indian practices. For more than 20 years, he said, a uranium-enrichment plant outside Mysore, India, has placed ads in newspapers to buy sensitive nuclear technology. The content of the ads revealed sensitive information, Albright said. The plant and trading companies acting on its behalf have also failed to identify the end-user for such equipment, he said.

In 2004, the State Department sanctioned an Indian scientist, Y.S.R. Prasad, for aiding Iran's nuclear program. Prasad is a former head of India's Nuclear Power Corporation and an expert on the extraction of tritium from heavy-water reactors. Tritium is used to make small, compact nuclear warheads.

Prasad has denied giving Iran information about tritium, and the Indian government has asked that the State Department restrictions on U.S. dealings with the scientist be lifted, said Venu Rajamony, spokesman for the Indian Embassy.

INDIAN NAVY TRAINS IRANIAN SAILORS; U.S., INDIA STRADDLE FOREIGN POLICY LINE [1]

BY: BY VIVEK RAGHUVANSHI, NEW DELHI AND GOPAL RATNAM, WASHINGTON

While U.S. President George W. Bush was in New Delhi earlier this month to sign a historic deal to supply nuclear fuel and technologies to India, two Iranian warships were in Kochi, the headquarters of Indian Navy's Southern Command, for a training program under a three-year-old military-cooperation agreement with Tehran.

The confluence of events illustrates the fine foreign-policy lines that U.S. and Indian officials are straddling.

The Bush administration is trying to slow Iran's nuclear-weapon program but also seeking Tehran's help in stabilizing Iraq. New Delhi appears to be striking a similar balance between closer strategic ties with Washington while seeking an independent relationship with oil-producing Iran.

The March 3–8 visit to Kochi by the IRIS Bandar Abbas, a fleet-supply-turned-training ship, and IRIS Lavan, an amphibious ship, was the first Iranian naval visit to India in many years, Indian Navy officials told local newspapers.

Indian naval instructors briefed nearly 220 Iranian sailors on the Indian Navy's training approach and course details, said Capt. M. Nambiar, spokesman for the Indian Navy's Southern Command.

The visit could be part of a larger Indo-Iranian naval training program, local press reports said. In 2003, India and Iran signed a strategic agreement to cooperate in defense and other matters. The deal was cemented by the visit of then-Iranian President Mohammed Khatami to the Republic Day parade in New Delhi, an honor usually reserved for key allies.

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But Indian officials tried to downplay the significance of the ships' visit, saying that it was a routine call by foreign training vessels at India's main naval training port.

"There is no particular significance to the timing of the call. This was a matter decided upon through normal diplomatic channels several months back and such visits are part of usual courtesies extended by navies of the world to their counterparts," one Indian diplomat said. "India's cooperation with Iran in the defense field is extremely limited."

Pentagon spokesman Lt. Col. Barry Venable declined to comment on India's training of Iranian sailors.

State Department officials also declined to comment by press time, saying they were seeking more details about the Iranian ship visit.

Concern in Washington

But the India-Iran relationship is of serious concern to policy-makers in Washington.

"India's relationship with Iran is a sensitive area that will shape how far we can go in our relationship with India, that's for sure," said Michael Green, who until recently directed Asia affairs at the White House National Security Council. Now an Asia specialist at the Center for Strategic and International Studies, Washington, Green he said he didn't know details of the Iranian ship visit.

The Bush administration, citing India's democracy and fast-growing economy, has highlighted the relationship as the cornerstone of a strategic push to build strong ties in Asia. A recent agreement settled by Bush and Indian Prime Minister Manmohan Singh would allow India to import nuclear fuel and technologies to meet India's energy needs.

The Pentagon and the American defense industry also are hoping to sell several billion dollars worth of high-tech weapons to India, including fighter planes, transport and surveillance aircraft, radar and naval vessels.

But key members of Congress—including Sen. Richard Lugar, R-Ind., chairman of the Senate Foreign Relations Committee, and Rep. Henry Hyde, R-Ill., chairman of the House International Relations Committee—have yet to throw their support behind the proposed nuclear agreement, which would require changes to U.S. law.

Both are staunch advocates of nonproliferation measures, and are concerned that the proposed deal could hurt international efforts to prevent the spread of nuclear weapons.

Former U.S. Sen. Sam Nunn, another such advocate, has said the U.S.-India nuclear cooperation could harm "United States' vital interests" and urged Congress not to support the deal without substantial modifications.

Seeking Balance

India and Pakistan have been discussing proposals for a $4.5 billion pipeline to import Iranian natural gas. U.S. Secretary of State Condoleezza Rice opposed the deal at a press conference in New Delhi in March 2005, saying it would encourage Tehran to defy the international community.

But Indian officials refused to abandon the project, and the White House has apparently changed its mind.

"Our beef with Iran is not the pipeline," Bush said in Islamabad March 4. "Our beef with Iran is in fact, they want to develop a nuclear weapon, and I believe a nuclear weapon in the hands of the Iranians will be very dangerous for all of us."

India reversed a long-standing position of its own in recent months by supporting Washington's effort to send the issue of Iran's nuclear-weapon program to the U.N. Security Council.

A top national-security official in India's previous government urged New Delhi to balance its ties to Washington and its neighborhood.

"India, by forging nuclear cooperation ties with the United States, should not adopt an American line on dealing with Iran," said Brijesh Mishra, who was national security adviser in the National Democratic Alliance government led by Prime Minister Atal Behari Vajpayee.

Mishra said ties to Iran could secure oil for energy-thirsty India as well as be "an important gateway" to improving relations with central Asian states.

India's vote against Iran "got the government into trouble with its own communist party allies" who saw it as a betrayal of the county's policies, said Salman Haidar, a senior fellow at the U.S. Institute of Peace, Washington, and a former foreign secretary of India.

The current government, led by Prime Minister Manmohan Singh ,is supported by communist parties known for their anti-American views.

Countries seeking closer relationship with the United States always face the problem of balancing their regional interests with those of Washington, Haidar said.

"India's strategic interest drives us toward Iran, but a different strategic calculation makes us wary of Iran. But we are certainly not going to treat Iran as a hostile power. If there is military action against Iran, I would not be surprised if India stays away from it. Not being looked upon as an American auxiliary is important for India. That's the way we are going."

RETHINKING INDIA[1]

EDITORIAL

PRESIDENT BUSH ARRIVES in India today to pursue one of his longtime foreign policy objectives: bringing the United States and India closer. It's a worthy goal. India is the world's largest democracy, and its economy is growing. And although the White House doesn't want to draw too much attention to old-school realpolitik, India is in a strategically important neighborhood, sharing borders with China and Pakistan.

But the price Bush has paid for closer ties with India is too high. The deal he struck last summer for nuclear cooperation with New Delhi would undermine the Nuclear Nonproliferation Treaty. It would reward India, which never signed the treaty, cheated on an earlier technology deal with the United States, then went on to test a nuclear bomb.

The message to Iran, North Korea and other nuclear wannabes couldn't be clearer or more destructive. These regimes and others will rightly conclude that the United States is interested in stopping the spread of nuclear know-how and technology only to regimes it dislikes. This perceived double standard only confirms the view that the Bush administration doesn't really believe in nonproliferation or any other treaty-based form of arms control or security. It just believes in changing hostile regimes whose aspirations threaten ours. This undermines U.S. moral leadership on the single most dangerous threat to humankind: the spread of nuclear weapons.

But there's still hope. The nuclear deal requires approval from both nations' legislatures, and it's in deep trouble in Washington and New Delhi.

In Washington, the administration has failed to secure the support of Congress, notably Sen. Richard G. Lugar (R-Ind.), whose views deserve particular respect because of his decades of work on nuclear disarmament and risk reduction. In India's Parliament, the deal is also under fire. The nationalist right thinks Washington should recognize that India is already an independent nuclear power that need make no concessions. There may be no way to avoid a collision here, but Bush should try to convince Indian officials that the deal needs to be renegotiated if it is to gain congressional approval.

One interesting idea for a revamped deal comes from Daniel Poneman, a former National Security Council official. He proposes that India sign on to a plan similar to the one that Russia is offering Iran: lease nuclear fuel from abroad for its civilian reactors instead of making its own. The spent fuel, which can be used to make nuclear weapons, could be safeguarded by the International Atomic Energy Agency.

India's sensitivity about its sovereignty may make the idea a non-starter; after all, the reason India didn't sign the nonproliferation treaty in the first place is because it does not believe its nuclear plans should be subject to conditions set by others. Still, an effort by Bush to pull back will help restore the global credibility of the nonproliferation ideal.

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VIII.—HEARING OF THE U.S. SENATE COMMITTEE ON FOREIGN RELATIONS, APRIL 26, 2006

U.S.–INDIA ATOMIC ENERGY COOPERATION: STRATEGIC AND NONPROLIFERATION IMPLICATIONS

WEDNESDAY, APRIL 26, 2006

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

The committee met, pursuant to notice, at 9:33 a.m., in room SD–419, Dirksen Senate Office Building, Hon. Richard G. Lugar (chairman of the committee) presiding.

Present: Senators Lugar, Hagel, Chafee, Allen, Voinovich, Martinez, Biden, Boxer, Nelson, and Obama.

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

The CHAIRMAN. This hearing of the Senate Foreign Relations Committee is called to order.

The committee meets today to continue its examination of the United States-India Civilian Nuclear Agreement. On April 5, the committee met in open session with Secretary of State Condoleezza Rice. On March 29, we examined the agreement in closed session with Under Secretaries Nick Burns and Bob Joseph. Today, we'll have the opportunity to hear the views of the eight esteemed experts from outside the U.S. Government.

Now, some months ago, I submitted 82 questions, related to the agreement, to the State Department as an initial step toward establishing a dialog that would help Congress make an informed decision. The State Department provided answers to all those 82 questions. After the hearing with Secretary Rice, I submitted about 90 additional questions for the record. The ranking member and several other members of this committee have also submitted questions after these hearings. We appreciate the administration's attention to these questions as the committee carefully works through the intricacies of the nuclear agreement with India.

The committee is cognizant of how valuable a closer relationship with India could be for the United States. At our last hearing, many members commented on the importance of improving ties with India. Our nations share common democratic values, and the potential of our economic engagement is limitless.

Energy cooperation between the United States and India is particularly important. India's energy needs are expected to double by 2025. The United States has an interest in expanding energy cooperation with India to develop new technologies, to cushion supply disruptions, to cut greenhouse gas emissions, and to prepare for declining global fossil fuel reserves. The United States own energy problems will be exacerbated if we do not forge energy partnerships with India, China, and other nations experiencing rapid economic growth. That is why I have introduced S. 2435, the Energy Diplomacy and Security Act, which would encourage international energy dialogs and advance a broad range of energy diplomacy goals.

But even as we pursue closer ties with India, we must examine the implications and risks of initiating a cooperative nuclear relationship. India has not signed the Nuclear Non-Proliferation Treaty; it has built and tested nuclear weapons; it has declared its intention to continue its nuclear weapons programs and the production of fissile material. If Congress approves this agreement, we will be establishing a new course after decades of declining any cooperation with India's nuclear program. Consequently, our committee has spent much time probing the details of the United States-India Civilian Nuclear Agreement.

Among many questions, we are attempting to evaluate the potential benefits of drawing India into a deeper relationship with the International Atomic Energy Agency and placing more Indian reactors under safeguards. The committee has also expressed great interest in the timing and sequence of how the India Nuclear Agreement would be implemented. Since the committee last met with Secretary Rice, India has initiated discussions with the International Atomic Energy Agency on a safeguards agreement and an additional protocol. This is a welcome development, but I urge India and the IAEA to work hard to conclude an effective agreement in a timely fashion. All parties involved in the negotiations, including the Bush administration, should facilitate the maximum amount of transparency possible so that Congress is better equipped to make informed judgments.

Today we will hear from two panels of highly knowledgeable experts. Our first panel will focus on the strategic dynamics of the agreement, and the second panel will take up the question of nonproliferation implications of nuclear cooperation between the United States and India.

On our first panel, we welcome the distinguished former Secretary of Defense, William Perry. Presently, he is codirector of the Preventive Defense Project. He is joined by Dr. Ashton Carter, also a codirector of the Preventive Defense Project and a former Assistant Secretary of Defense for International Security Policy. Joining them will be Dr. Robert Gallucci, dean of the Edmund A. Walsh School of Foreign Service, at Georgetown. Dr. Gallucci served as a chief U.S. negotiator during the 1994 crisis over North Korea's nuclear program. And, finally, Dr. Ashley Tellis is with us, from the Carnegie Endowment for International Peace. Dr. Tellis played a leading role in the formulation of the United States-India Nuclear Agreement, serving in key State Department positions.

On our second panel, we will welcome Dr. Ronald Lehman, director of the Center for Global Security Research at Lawrence Liver-

more National Laboratory and formerly the head of the U.S. Arms Control and Disarmament Agency; Mr. Robert Einhorn, a senior advisor at the Center for Strategic and International Studies and formerly Assistant Secretary of State for Nonproliferation; Dr. Gary Milhollin, director of the Wisconsin Project on Nuclear Arms Control; and Dr. Stephen Cohen, a senior fellow at Brookings Institution.

We are pleased to have with us so many good friends of this committee. Most of our witnesses have provided invaluable service to the Foreign Relations Committee over the years as we have struggled with nonproliferation and other geopolitical issues. We thank each of them in advance for their willingness to again lend a hand to us with their extraordinary expertise.

I would like now to call upon the distinguished ranking member of the committee for his opening statement.

Senator Biden.

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

Senator BIDEN. Thank you very much, Mr. Chairman. And I'd ask unanimous consent that my entire opening statement be placed in the record, and I'll try to——

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

Senator BIDEN [continuing]. Truncate it a bit, because I know we're up against a vote later on, and we have some very important witnesses.

And I'd also say, at the outset, that I have a number of questions that at least I deem to be important, and it would take some time for the witnesses to respond to all of them. So, what I may do is submit them in writing to the witnesses, so that we can get through everyone, and shorten the question period so everybody gets a chance to ask questions.

But I want to begin by thanking you, Mr. Chairman, for holding this hearing, actually a series of hearings we're going to have, on this—the administration's nuclear deal with India.

The administration didn't consult with us, at least didn't consult with me, as it negotiated its July 18 Joint Statement between President Bush and Prime Minister Singh. And, in my view, it's paid little attention to our concerns as it negotiated with India, regarding plans for separating India's civil nuclear facilities from its military ones. And it submitted a legislative proposal to us, and a decision proposal to the Nuclear Suppliers Group, that I would argue is poorly drafted enough to cast doubt on the administration's approach.

But, despite this, as I indicated 3 weeks ago, I think we're in a quandary here. Quite frankly, this is not a treaty I would have suggested that we negotiate the way it was negotiated. But the downside and the impact on our strategic relationships in the region, I think, at least as this hearing starts, I start from the premise—that it would do serious damage if we rejected this treaty. But the upsides of the treaty are not nearly as positive as I think they could or should be, which leads me, Mr. Chairman, to suggest that I—like many others, I suspect—am considering amendments that might deal with some of what I believe to be the shortcomings in

this negotiated agreement, primarily not demanding positions from India, but assurances from the administration as to how they'll proceed.

And we need a lot more answers, Mr. Chairman. Although you've indicated that the administration answered a lot of your questions, I don't know that many questions that have been submitted have been answered since the separation agreement has been submitted to us, in March; and it has yet to share the negotiating record or explain just what it agreed to when it accepted the idea of "India-specific" safeguards or "corrective measures that India may take in the event of disruption of foreign fuel supplies" or assurances regarding fuel supplies or strategic reserves of nuclear fuel for India. I'm still uncertain as to what all that means. The administration has yet to share with us the full list of India's civil nuclear facilities, even in a classified forum. And it has not met what I thought was a commitment to share drafts of the peaceful nuclear cooperation agreement that it is negotiating with India. I think all of this is worth us being able to look at and see.

But, as I said, Mr. Chairman—I must stay up front—this new deal for India makes more sense than it does harm. But I don't think it is, to use the phrase of a famous American formerly in the administration, I don't think it's a slam dunk. And that's why we're here today, to take the testimony from some of our country's best thinkers on nuclear policy.

I will submit, as I said, the rest of my statement for the record, but I'm anxious to hear from our witnesses, and I will, as I said, Mr. Chairman, in addition to the few questions I might ask, have a number of very specific questions I'd like to ask them to consider responding to in writing. I realize, in a sense, that makes more work for them. I apologize for that. But it would be helpful.

Thank you.

[The prepared statement and addition material of Senator Biden follow:]

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

Thank you, Mr. Chairman. And thank you for chairing this series of hearings on the administration's nuclear deal with India.

The administration did not consult us as it negotiated the July 18 Joint Statement between President Bush and Prime Minister Singh.

It paid little attention to our concerns as it negotiated with India regarding India's plan for separating its civil nuclear facilities from its military ones.

And it submitted a legislative proposal to us and a decision proposal to the Nuclear Suppliers Group that were so poorly drafted as to cast doubt on the administration's seriousness of purpose.

Despite this, I indicated 3 weeks ago that I will probably support the agreement at the end of the day. I did so because I agree that the time has come to develop a new relationship between India and the parties to the Nuclear Non-Proliferation Treaty.

And I did so also because undoing this deal could do more damage—in terms of our relationship with India—than approving it, with carefully drafted conditions.

This deal brings risks, and I believe the administration and Congress must minimize those risks.

So far, Mr. Chairman, the administration has done a lot more to lobby us than to work with us.

- It has yet to answer our questions for the record.
- It has yet to share its negotiating record or explain just what it agreed to when it accepted the idea of "India-specific safeguards," or "corrective measures that India may take . . . in the event of disruption of foreign fuel supplies," or U.S.

"assurances regarding fuel supply," or "a strategic reserve of nuclear fuel" for India.

- The administration has yet to share with us the full list of India's civil nuclear facilities—even in classified form.
- And it has reneged on an earlier promise to share drafts of the peaceful nuclear cooperation agreement that it is negotiating with India.

Mr. Chairman, I still think that a new deal for India makes sense. But it isn't a "slam dunk," as they say, and that is why we are here today to take testimony from some of our country's best thinkers on nuclear policy.

Today's witnesses all have impressive backgrounds, and I have relied upon the wisdom of many of them over the years. I look forward to hearing their insights today.

I want to especially thank Bill Perry for coming in from California and for upsetting his schedule in Washington in order to help us today. Dr. Perry is a man who answers his country's call, just as he did regarding North Korea policy after he had retired as Secretary of Defense.

I would recommend that we also schedule a follow-up hearing with experts on the Atomic Energy Act, to discuss possible amendments to S. 2429, and experts on India who could tell us what the consequences of enacting those amendments might be.

Finally, Mr. Chairman, I hope that you will make clear to the administration that the Senate and this committee should not be taken for granted.

We expect the administration to answer our questions, to provide us the details on the related agreements that India is negotiating with the United States and with the IAEA, and to work with us to make S. 2429 a respectable bill.

Until the administration does that, we simply should not act on its proposed legislation.

Mr. Chairman, we recently received a letter from Ambassador John Ritch, a former staff member of this committee, in support of the India nuclear deal. I ask that his letter and an attached op-ed from the International Herald Tribune be included in today's hearing record.

Thank you.

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23 APRIL 2006.

Hon. RICHARD G. LUGAR, *Chairman,*
Hon. JOSEPH R. BIDEN, Jr., *Ranking Member,*
Committee on Foreign Relations,
U.S. Senate, Washington, DC.

Subject: Submission on U.S.-India Nuclear Cooperation

DEAR SENATORS LUGAR AND BIDEN: For the committee's consideration and record in connection with the 26 April hearing on proposed U.S.-India nuclear cooperation, I offer the attached summary of my views, as published recently in the International Herald Tribune. My perspective derives from:

- 22 years of service on the staff of the Foreign Relations Committee;
- 7 years as U.S. representative to the IAEA and other U.N. agencies in Vienna; and
- 5 years interacting with the Indian nuclear establishment in my current capcity.

With respect and warm regards,

JOHN B. RITCH,
Director General, World Nuclear Association.

[From the International Herald Tribune, Apr. 6, 2006]

IT MAKES SENSE TO END INDIA'S NUCLEAR ISOLATION

(By John B. Ritch)

LONDON.—President George W. Bush has taken a momentous step in shelving a U.S. policy that for three decades cast India as a nuclear pariah-state and isolated the world's largest democracy from nuclear commerce, even for the peaceful purpose of generating electricity.

In Washington a fierce debate has erupted over the impact on the Nuclear Nonproliferation Treaty.

The U.S.-India deal conforms to the treaty by ensuring that nuclear commerce remains in the civil realm. But critics say it jeopardizes the treaty by legitimizing In-

dia's nuclear deterrent. Supporters counter that India's weapon is a long-standing fact, that India has used nuclear technology responsibly and that it is time to close ranks with a democracy.

Before the Bush initiative, two truths coexisted uneasily. First, the nonproliferation regime is one of history's great diplomatic achievements. Since its inception in 1970, the treaty has kept the number of nuclear-armed nations under 10.

Episodes of non-compliance have shown the treaty's value. After the first Gulf War revealed Iraq's covert nuclear efforts, the treaty regime gained strength as the International Atomic Energy Agency acquired new detection capabilities and broader authority for its inspectors. Treaty inspections "caught" both North Korea and Iran, and have spurred collective diplomacy against these violations.

A second, less convenient truth is that the treaty was, from the outset, unfair to India as a great nation. The treaty drew a line in time, recognizing only the UN Security Council's five permanent members as "nuclear-weapon states." Thus, when India became the world's sixth nuclear power in 1974, it faced Hobson's choice: Disarm or remain outside the treaty.

For reasons of principle and strategic interest India remained outside, declaring that it would eliminate its small deterrent as soon as the five favored "weapon states" fulfilled a treaty pledge to dismantle their own much larger nuclear arsenals.

Indians went on, for three decades, to become proud developers and careful custodians of their own sophisticated nuclear technologies. To supply power for economic growth, India now plans to build hundreds of reactors by mid-century, even without the new agreement.

The Bush initiative would accept India's reality. Critics complain that the accord leaves India's military program "unconstrained." Advocates counter that India's civil power reactors will fall under inspection safeguards.

This debate is sterile. Inspections on India's civil facilities cannot affect its military program. But neither will civil nuclear trade with India spur an Asian arms race. India's leaders have no motive to abandon India's long-standing policy of maintaining minimal nuclear deterrence vis-a-vis Pakistan's smaller nuclear force and China's larger one.

Although legal under the nonproliferation treaty, the deal will require change in a U.S. law enacted in 1978 that made treaty membership a condition of nuclear trade. In 1992, the Nuclear Suppliers Group of nations embraced the same coercive approach. Now these countries are set to follow the U.S. lead, with only China expressing resistance.

The new policy would revert—in the unique case of India—to the basic treaty requirement of confining nuclear trade to the civil realm. It would also welcome India as a partner in world nuclear trade controls and collaborative projects to develop nuclear technology.

Some say that ending India's nuclear isolation sends a dangerous message to potential proliferators. This charge does not withstand analysis. How will the ambitions of Iran, North Korea, and Pakistan be inflamed by the principle now being affirmed?

The principle is this: In sensitive nuclear technology, we will trade legally—and with nations that have earned the world's trust. As a practical matter, no nation appears likely to "proliferate" because India is allowed civil nuclear commerce.

Thus has the new policy been endorsed by Hans Blix and Mohamed Elbaradei, the IAEA leaders entrusted over the last quarter century to oversee the nonproliferation regime.

Nuclear cooperation with India offers some economic opportunity—and potentially enormous environmental value. India has recognized the urgency of a worldwide clean-energy revolution if humankind is to avoid unleashing devastating climate change.

The U.S.-India deal promises a partnership between the two largest democracies to deliver this environmental benefit—within India and to a wider world—on a scale that can make a difference.

With a strong legal, strategic and environmental rationale, this is a Bush initiative that has gained a broad coalition of support abroad.

The CHAIRMAN. Well, thank you very much, Senator Biden.

And I appreciate your sentiments. And we're all probing. And hopefully witnesses will be able to answer our questions today, as well as additional questions as we seek more information.

Let me suggest, as a format for our hearing, Senator Biden has mentioned, and I talked to him a moment before the meeting,

about the fact that we will have rollcall votes at noon. We have two distinguished panels, and many Senators who wanted to ask questions. So, I'm going to ask if the witnesses could try to summarize their initial comments in approximately 7 minutes or so, plus or minus a minute or two, and then ask members, in our round of questioning, to confine their questions to 5 minutes. At least arithmetically, I think we can make it, that way. And if we don't, why, the world will not come to an end—

[Laughter.]

The CHAIRMAN [continuing]. And we will do the best that we can to honor the opportunities for both witnesses and members to ask their questions.

I'd like to ask for the testimony, on the first panel, to commence in this order. First of all, Dr. Carter, then Secretary Perry, then Dr. Gallucci, and then Dr. Tellis.

Dr. Carter, we're delighted, once again, to have you here, and if you would proceed.

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

Dr. CARTER. Thank you, Mr. Chairman and members.

Mr. Chairman, I have a written statement, which takes the form of an article that will appear in the forthcoming issue of Foreign Affairs, which is dedicated to the emergence of India onto the world stage. They've not released it yet for me to enter it into the record, but, with your permission, when it does get released, I'd like to make that my written statement.

The CHAIRMAN. It will be placed as a part of the record. And let me just say, the prepared statements each of you made will be made a part of the record. You need not ask for permission. That will occur.

Dr. CARTER. Thank you.

I would like to offer my three-part assessment of both the nuclear and nonnuclear aspects of the India deal. First, I will assess what the United States gave, and the implications of what it gave, for the nonproliferation regime; second, I will examine what the United States stands to get from India in return; and, third, I will assess the likelihood that we will actually get what we are seeking as our side of the bargain.

Today I will argue that the deal, as negotiated by the United States, is quite uneven, but I will not be recommending that the United States attempt to rebalance the deal by seeking more technical nuclear steps by India. Instead, I think that rebalancing should be done by clarifying that the strategic partnership inaugurated by this deal carries very high expectations of India, especially in connection with Iran and its nuclear program.

I judge the damage to the nonproliferation regime occasioned by this deal to be palpable, but quite manageable. This is not a torpedo amidships, as some have said, but American efforts to seek additional technical measures will not appreciably repair whatever damage has already been done.

Mr. Chairman and members, most of the controversy about the India deal has swirled around its nuclear aspects. This is understandable, since preventing nuclear war and terrorism is the highest American national security priority in this era, as Bush himself has acknowledged. The decade has already witnessed a stunning defeat for the United States in North Korea's runaway nuclear program. The same could be unfolding more slowly in Iran. Meanwhile, an unbowed Osama bin Laden has declared to his followers that obtaining weapons of mass destruction is a "religious duty."

Indeed, if the nuclear aspects of the India deal are assessed in isolation, one must conclude that the deal was a very unbalanced one, and a bad one for the United States. Washington recognized Delhi's nuclear status in return for little in the way of new steps by India to combat nuclear proliferation and terrorism that Delhi was not already committed or inclined to give, and for almost no technical restraints on India's growing nuclear arsenal.

Through the U.S. concession, the nonproliferation regime also paid a palpable, although probably manageable, price to its integrity and support. But it would be a mistake to assess the India deal in a nuclear-only frame.

President Bush and his key advisors were clearly looking through a wider lens, and so should the public and the U.S. Congress. Viewed through such a wider geopolitical lens, the deal has the United States giving the Indians what they have craved for so long—nuclear recognition—in return for a strategic partnership between Washington and Delhi, as the two democracies face similar potential challenges from China, Pakistan, Iran, and elsewhere in the coming decades. In short, Washington "gave" on the nuclear front to "get" something on the nonnuclear front.

Powerful arguments can be made that strategic partnership with India will prove to be in the deep and long-term U.S. 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 as negotiated by President Bush is quite uneven. First of all, a United States-Indian strategic partnership would seem to be in Delhi's interest as well as America's. So why pay them 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. The United States gave its big quid of nuclear recognition up front, as we essentially already gave it last summer, but what we stand to get in return from partnership with India lies further out in an uncertain future.

Despite the deal's flaws, Congress should not attempt to renegotiate the deal to win a more balanced version than the Bush administration obtained. The big U.S. card of nuclear recognition has already been played, and cannot be taken back by Congress at this point, without casting a lasting cloud over the whole idea of Indo-U.S. partnership.

Haggling over some of the details of the implementation of the nuclear parts of the deal is unlikely to restore much of whatever lost reputation for nonproliferation consistency the United States has already suffered, and would probably be viewed as grudging and punitive in Delhi. The result would be to undermine the good-

will that was supposedly the whole purpose of giving nuclear recognition to India in the first place.

Rather than subtracting from the Indian side of the ledger in an effort to rebalance the India deal, Congress should, instead, emphasize what the United States expects on its side of the ledger to give meaning to the new "strategic partnership." The United States should expect India to join it in countering any destabilizing effects China's future rise might have on Asian security; assisting in any emergency in Pakistan, such as radicalization of its government or loss of control of its nuclear weapons; reversing traditional Indian opposition to controls on transfer of nuclear technology, and especially using its diplomatic clout against potential proliferators like Iran; growing its military-to-military relationships, including arms cooperation, to match, in time, those the United States has with its closest allies; and giving preferential treatment to United States defense and nuclear industries when the Indian Government makes investments in these sectors. That would rebalance the ledger. That's the kind of rebalancing I think we should be seeking.

If I may, Mr. Chairman, there are two particular issues I wanted to address in the assessment.

The first is the question of how much damage nuclear recognition for India did to the nuclear nonproliferation regime. The United States has declined to recognize India's nuclear arsenal over time for two reasons. First, India's nuclear arsenal is watched closely by arch rival and nuclear-armed Pakistan and by China, with which India has fought no fewer than three wars since its independence from Great Britain. Recognizing the Indian arsenal, the argument went, might spar its open growth and thus an arms race in South Asia. The second reason had to do with the integrity of the NPT regime, and that is the point I'd like to touch on briefly, if I may.

It is inconceivable to me that North Korea's Kim Jong Il pays much heed to the internal consistency of the NPT regime as he calculates how far he can get with his nuclear breakout. North Korea's governing ideology is less communism than a fanatical embrace of autarky and "self-reliance," including open defiance of international norms like the nonproliferation regime. North Korea's tolerance for international ostracism is legendary. If Kim's nuclear program can be stopped at all at this point, it will be through a tough and focused diplomacy of sticks and carrots in which the NPT will play little part. Likewise, after 1998 Saddam Hussein simply ceased paying attention to the NPT.

Iran's cat-and-mouse game with the EU–3, the United States, and the IAEA over its recently revealed nuclear program bespeaks at least a smidgen of sensitivity to international opinion as embodied in the NPT. Nuclear recognition for India gives Tehran a new talking point: If India gets a free pass, why not Iran? But, like North Korea, Iran's nuclear program has deeper roots, and against these the NPT will not weigh in very heavily. Besides, for now, Tehran denies it is seeking a nuclear arsenal at all but only nuclear power, so it will be hard-pressed to use India as a precedent for its current diplomatic situation.

The impact of the Bush-Singh deal on the "rogues" is therefore minimal. Its main impact will be felt on two other groups of countries. First, there are the "in-betweens": States that are not rogues,

but that flirt with nuclear status. In the recent past, the in-betweens have included South Africa, Argentina and Brazil, the post-Soviet States of Ukraine, Kazakhstan, and Belarus—which you, Mr. Chairman, did so much to denuclearize, as did Secretary Perry—South Korea, Taiwan, and, only recently joining this category, Libya. These in-betweens turned away from nuclear weapons for many reasons specific to their own individual circumstances, but in each case, the lasting international ostracism threatening them if they stood outside the NPT regime, was an influential factor for both governments and their people. Nuclear recognition for India suggests that forgiveness will eventually come to proliferators who wait, and tomorrow's in-betweens might be tempted by the Bush-Singh precedent.

The most nonproliferation damage, curiously, might be done among the stalwarts of the regime: Governments that have no nuclear ambitions at all, but that faithfully uphold the rules, and also the nuclear powers that already enjoy a privileged place in it. These groups not only provide political support to discourage in-betweens and confront rogues, they provide vital and direct technical support by denying critical exports to those who infringe the NPT's rules.

Damage limitation from this Bush-Singh deal must, therefore, center on the in-betweens and the stalwarts, not the rogues. A plan for doing so was a logical part of the U.S. diplomatic initiative, but it is clear that the Bush administration did not have one until after the deal was concluded, still less did it consult widely before Bush made his dramatic volte-face in July 2005.

But most of the nations whose adherence to the NPT regime is critical will either support the deal or acquiesce in it. First, most accept the United States argument that India's nuclear nonproliferation behavior has been good—there have apparently been no Indian AQ Khans—and that India's possession of nuclear weapons is an established fact and cannot be reversed. Second, all can see that India is hardly a rogue state, but a stable democracy likely to play a large and constructive role in the world of the 21st century. Third, many will regard India's 30 years in the "penalty box," which exacted a heavy price from Delhi in both prestige and technology, as sufficient to make the point that the regime's adherents are serious about enforcing its norms.

These arguments have won over many in the international nonproliferation community, notably IAEA Director General and Nobel laureate, Dr. Mohamed ElBaradei. And so, while there is some grumbling within the NPT regime over the deal, a revolt or collapse is not likely, and the damage to the regime can, in my judgment, be limited.

The final point I'd like to make is that even as critics have exaggerated the nonproliferation costs of the nuclear part of the deal, so also its proponents have exaggerated its benefits in terms of energy security and nuclear security.

Bush administration spokesmen have defended the deal's nuclear power provisions as critical to stopping India's rise from posing an oil and environmental crisis. But this claim does not survive close scrutiny. Energy security is terribly important to both India and the United States. All want India's huge population to satisfy its

energy needs, which will grow faster than its GDP, increasing as much as fourfold within 25 years, without contributing further to dependence on Middle East oil, pollution, and global warming. But the arithmetic does not support the case that nuclear power will add up to make the critical 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, whereas, nuclear plants—which today produce only 3 percent of India's electricity—will remain a single-digit contributor even under the most extravagant projections of United States-assisted nuclear expansion in India.

Indian coal is plentiful, but of poor quality and highly polluting. 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.

India's share of world oil consumption will grow from 3 to 4 percent over the next 20 years. But 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.

Finally, the type of assistance the United States is best positioned to provide to India's nuclear generation capacity—light water reactors operating on low-enriched uranium fuel—is at odds with the Indian establishment's uneconomical vision of a civil nuclear power program built primarily around breeder reactors. Indeed, much of what has been said on the energy front just doesn't survive the numbers.

The administration also claims the deal will require India to improve its laws and procedures for controlling exports or diversions of sensitive nuclear technology—preventing an Indian AQ Khan. But at the same time, the administration acknowledges India's apparently excellent 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 the deal.

In any event, the United States is justifying 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 for the United States to argue this point both ways at the same time.

What is it then, that the United States should expect to get from the "strategic partnership" if a lot of these other things we're supposed to get don't hold up? There are five principal benefits the United States should seek to appropriately rebalance the deal. Some of those are future and hypothetical, but ones that we can fully expect we might need from strategic partnership from India in the future. I mentioned these five objectives earlier. The first two have to do with China and with Pakistan. Though no one wants to see either of the scenarios come to fruition in the future, neither can anyone rule them out. In either case, having India as a partner of the United States will strengthen our hand. Third, and most urgently, India should truly join the nuclear club, reversing

old nonaligned habits and putting its diplomatic shoulder to the wheel in the case of Iran and other urgent counterproliferation efforts. Fourth, the United States should expect a continued intensification of Indo-U.S. military-to-military contacts. Much more could be said about that, and Dr. Perry knows more about this issue than anybody else. Fifth and finally, as I said earlier, the United States should expect preferential treatment for United States industry in India's civil nuclear expansion and modernization of its military.

Will we get all that? To fulfill all of these objectives will require India to change many of its longstanding positions, and that is not likely to happen all at once. Those who say that India's longstanding diplomatic positions will yield to this grand gesture the United States has now made of nuclear recognition are naive.

Americans view the change of longstanding and principled nonproliferation policy to accommodate India as a concession, but Indians view it as an acknowledgment of something to which they have long been entitled. This is not a durable basis for a diplomatic transaction, and thus as a transaction, the deal was unbalanced. Still, in all, I think that the United States stands to enjoy tremendous gains from the strategic partnership with India. To the extent damage was done to the nonproliferation regime, it is manageable and was done when recognition was granted, and small measures cannot repair it.

Thank you, Mr. Chairman.

[The prepared statement of Secretary Carter follows:]

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

ASSESSING THE INDIA DEAL [1]

During a state visit to Washington in July of 2005, Indian Prime Minister Manmohan Singh and U.S. President George W. Bush announced a potentially far-reaching "strategic partnership" between what will probably be the 21st century's most powerful democracies. To inaugurate what came to be known as the India Deal, Bush abruptly fulfilled a thirty-year quest by Delhi to be recognized as a sixth "legitimate" nuclear power, alongside the five victors of World War II. In March of 2006, in a reciprocal visit to India, Bush settled most of the remaining details of the nuclear part of the India Deal in Delhi's favor.

Debate in both Washington and Delhi has swirled around the nuclear aspects of the India Deal. This is understandable, since preventing nuclear war and terrorism is the highest American national security priority in this era, as Bush himself has acknowledged. The decade has already witnessed a stunning defeat for the United States in North Korea's runaway nuclear program. The same could be unfolding more slowly in Iran. Meanwhile, an unbowed Osama bin Laden has declared to his followers that obtaining weapons of mass destruction is a "religious duty."

Indeed, if the nuclear aspects of the India Deal are assessed in isolation, one must conclude that the Deal was a bad one for the United States. Washington recognized Delhi's nuclear status in return for little in the way of new steps by India to combat nuclear proliferation and terrorism that Delhi was not already committed or inclined to give, and for almost no technical restraints on India's growing nuclear arsenal. Through the U.S. concession, the nonproliferation regime also paid a palpable, although probably manageable, price to its integrity and support.

But it would be a mistake to assess the India Deal in a nuclear-only frame. President Bush and his key advisors were clearly looking through a wider lens, and so should the public and the U.S. Congress, which must amend U.S. nonproliferation laws that forbid the policies Bush agreed to. Viewed through such a wider geopolitical lens, the Deal has the United States giving the Indians what they have

[1] An edited version of this statement appeared in the July/August issue of Foreign Affairs.

craved for so long—nuclear recognition—in return for a strategic partnership between Washington and Delhi as the two democracies face similar potential challenges from China, Pakistan, Iran, and elsewhere in the coming decades. In short, Washington gave on the nuclear front to get something on the non-nuclear front. Powerful arguments can be made that strategic partnership with India will prove to be in the deep and long-term U.S. security interest. Indo-U.S. partnership seems not only logical but eminently achievable in India's democracy: in an influential 2005 Pew Research Center poll of 15 leading nations, India reported the highest proportion of favorable views of the United States at 71 percent. 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 as negotiated by President Bush is quite uneven. First of all, a U.S.-Indian strategic partnership would seem to be in Delhi's interest as well as America's. So why pay them for it? Second, the Deal is uneven in its specifics—what the U.S. gives is spelled out quite clearly, but what India gives in return is vaguer. Third, the Deal is uneven in timing—the United States gave its big *quid* of nuclear recognition up front, but what it stands to get in return from partnership with India lies further out in the uncertain future.

Rebalancing the Deal

Despite the Deal's flaws, Congress should not attempt to renegotiate the Deal to win a more balanced version than the Bush administration obtained. The big U.S. card of nuclear recognition has already been played and cannot be taken back by Congress at this point without casting a lasting cloud over the whole idea of Indo-U.S. partnership. Haggling over some of the details of the implementation of the nuclear parts of the Deal is unlikely to restore much of whatever lost reputation for nonproliferation consistency that the U.S. has already suffered, and would probably be viewed as grudging and punitive in Delhi. The result would be to undermine the goodwill that was supposedly the whole purpose of giving nuclear recognition in the first place.

Rather than subtracting from the Indian side of the ledger in an effort to rebalance the India Deal, Congress should instead emphasize what the U.S. expects on its side of the ledger to give meaning to the new "strategic partnership." The United States should expect India to join it in countering any destabilizing effects China's future rise might have on Asian security; assisting in any emergency in Pakistan such as radicalization of its government or loss of control of its nuclear weapons; reversing traditional Indian opposition to controls on transfer of nuclear technology and especially using its diplomatic clout against potential proliferators like Iran; growing its military-to-military relationships, including arms cooperation, to match in time those the United States has with its closest allies; and giving preferential treatment to the U.S. defense and nuclear industries when the Indian government makes investments in these sectors.

To see how the ledger can be rebalanced over time, one needs first to consider what India already got from the Deal on the nuclear front, and its repercussions for the nonproliferation regime; second, to prescribe the broader benefits the United States should aim to get from strategic partnership from India in coming decades; and third, to assess the chances that U.S. expectations will actually be met.

What Delhi Got

India obtained defacto 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 Nuclear Nonproliferation Treaty (NPT). The U.S. will not deny it most civil nuclear technology or commerce, nor require it to put all of its nuclear facilities under International Atomic Energy Agency (IAEA) safeguards—only those it declares to be civil. India can now import uranium, which has been a bottleneck in its nuclear program. It is worth noting that even if the Bush administration wished to make India a formal Nuclear Weapons State under the NPT (which it refused to do), it probably could not persuade all the other signatories of the NPT to agree to the change (such amendments require unanimity).

Besides the new access to technology, nuclear recognition grants an enormous political benefit to India. With one stroke India joins the United States, Russia, China, Great Britain, and France as "legitimate" wielders of the power and influence that nuclear weapons confer. The Deal allows India to transcend the nuclear box that has for so long defined and constrained its place in the international order, hopefully jettison at last its outdated Non-Aligned Movement stances and rhetoric, and occupy a more normal and modern place in the diplomatic world. Critics of the Deal contend that India's past and likely future behavior do not warrant this free pass. Proponents predict that with the nuclear issue (which the Bush administration de-

scribes as the "basic irritant" in Indo-U.S. relations) out of its psychological way, India will pivot from detractor of much of the international order, including especially the nonproliferation regime, to responsible stakeholder. Both sides agree that nuclear recognition is huge.

The Deal has naturally been popular in India. Supporters of Congress Party Prime Minister Singh have emphasized Bush's nuclear recognition and downplayed any sense that India has taken on important obligations in return. Criticism from the opposition Bharatiya Janata Party (BJP) has been narrow and technical and probably reflects chagrin that a Congress Party government and not the BJP secured the Deal. The other source of criticism has been leftists in the Left Front parties. 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.

Measuring the Impact of Nuclear Recognition for India

Previous U.S. administrations have adopted the stance that India's nuclear arsenal, first tested in 1974, is illegitimate and should be eliminated, or at least sharply constrained. They have done so for two reasons: First, India's nuclear arsenal is watched closely by arch-rival and nuclear-armed Pakistan and by China, with which India has fought no fewer than three wars since its independence from Great Britain. Recognizing the Indian arsenal, the argument went, might spur its open growth and thus an arms race in South Asia. Second, Washington wanted to stick strictly to the principles underlying the NPT: that signatories would get the benefits of international standing and peaceful nuclear commerce, but those like India that stood outside the regime would not. Compromising these principles would, it was feared, give heart to nuclear aspirants that they could "end run" the NPT if only they waited thirty years like India; it would also dishearten the many countries that were not about to go nuclear but which loyally supported the NPT against new proliferators.

But a stance is not a policy. As policy, elimination of India's arsenal became increasingly unrealistic as Pakistan went nuclear in the 1980s, and then more so when India tested five bombs underground and openly declared itself a nuclear power in 1998. As the Bush administration conducted its nuclear negotiations with India in the fall of 2005 and spring of 2006, it ultimately abandoned efforts by nonproliferation specialists to attach further conditions to the Deal that would constrain India from increasing its nuclear arsenal further. The U.S. insisted that the Deal is a broad strategic agreement, not an arms control treaty. For example, some have argued that India should be required to stop making fissile material for bombs now like the other acknowledged nuclear powers have done rather than wait for the negotiation of an international Fissile Material Cutoff Treaty. Others contend that India should have to place more of its nuclear facilities under IAEA safeguards, to prevent diversion of fissile materials from its nuclear power program to its nuclear weapons program. Yet others would have India sign the Comprehensive Test Ban Treaty rather than abide, as it has since 1998, by a unilateral moratorium on further underground testing of its nuclear arsenal.

The Indian government, with strong public support, has resisted all these efforts to constrain its future nuclear arsenal in technical ways. If the objective of U.S. proponents of these ways of rebalancing the India Deal is to prevent Indian arms racing with Pakistan and China, then that important goal would be better pursued in non-technical ways. India has stated its intention to pursue a "minimum deterrent" rather than an all-out arms race. The Bush administration has encouraged this path, and can now make it an expectation of India as a responsible member of the nuclear club. But if the objective of seeking additional constraints on India's nuclear program is to "take back" some of the gain India got from nuclear recognition, then such a grudging move is likely to backfire. Indians will understandably view such a move as inconsistent with Bush's whole intent to use nuclear forgiveness as a way to open the way for strategic partnership.

The second impact of nuclear recognition for India has to do with the integrity of the NPT regime and is more serious, though probably manageable. It is inconceivable that North Korea's Kim Jong Il pays much heed to the internal consistency of the NPT regime as he calculates how far he can get with his nuclear breakout. North Korea's governing ideology is less communism than a fanatical embrace of autarky and "self-reliance," including open defiance of international norms like the nonproliferation regime. North Korea's tolerance for international ostracism is legendary. If Kim's nuclear program can be stopped at all at this point, it will be through a tough and focused diplomacy of sticks and carrots in which the NPT will play little part. Likewise, after 1995 Saddam Hussein simply ceased paying attention to the NPT.

Iran's cat-and-mouse game with the EU-3, the U.S., and the IAEA over its recently-revealed nuclear program bespeaks at least a smidgen of sensitivity to international opinion as embodied in the NPT. Nuclear recognition for India gives Teheran a new talking point: If India gets a free pass, why not Iran which is also an important nation with an ancient culture? But like North Korea, Iran's nuclear program has deeper roots in its sense of security threat and Persian pride. Against these the NPT will not weigh in very heavily. Besides, for now Teheran denies it is seeking a nuclear arsenal at all but only nuclear power, so it will be hard-pressed to use India as a precedent for its current diplomatic position.

The impact of the Bush-Singh deal on the "rogues" is therefore minimal. Its main impact will be felt among two other groups of countries. First, there are the "in-betweens"—states that are not rogues but that flirt with nuclear status. In the recent past the in-betweens have included South Africa, Argentina and Brazil, the post-Soviet states of Ukraine, Kazakhstan, and Belarus, South Korea, Taiwan, and (only recently joining this category) Libya. These in-betweens turned away from nuclear weapons for many reasons specific to their own individual circumstances, but in each of these cases the lasting international ostracism threatening them if they stood outside the NPT regime was an influential factor for both governments and their people. Nuclear recognition for India suggests that forgiveness will eventually come to proliferators who wait, and tomorrow's in-betweens—Brazil comes to mind—might be tempted by the Bush-Singh precedent.

The most nonproliferation damage, curiously, might be done among the stalwarts of the regime: governments that have no nuclear ambitions at all but that faithfully uphold the rules, and the nuclear powers that already enjoy a privileged place in it. These groups not only provide political support to discourage in-betweens and confront rogues, they provide vital and direct technical support by denying critical exports to those who infringe the NPT's rules. The Nuclear Suppliers Group (NSG), in particular, coordinates controls on exports by the nations with advanced nuclear power technology. The NSG was created through U.S. leadership, and it is the U.S. that has long stood against backsliding by member governments that come under pressure from their nuclear industries to sell technology abroad more liberally, including especially to India. Now all of a sudden the United States has decided to change policy, and others too might consider themselves free to pick and choose where they apply the nonproliferation rules—the Chinese with Pakistan, the Russians with Iran, and some European vendors everywhere.

Damage-limitation from the Bush-Singh deal must therefore center on the in-betweens and stalwarts. A plan for doing so was a logical part of the U.S. diplomatic initiative, but it is clear that the Bush administration did not have one until after the Deal was concluded, still less did it consult widely before Bush made his dramatic *volte-face* in July 2005. But most of the nations whose adherence to the NPT regime is critical will either support the Deal or acquiesce in it. First, most accept the U.S. argument that India's nuclear nonproliferation behavior has been good—there have apparently been no Indian A.Q. Khans—and that India's possession of nuclear weapons is an established fact and cannot be reversed. Second, all can see that India is hardly a rogue state, but a stable democracy likely to play a large and constructive role in the world of the 21st century. Third, many will regard India's thirty years in the "penalty box," which exacted a heavy price from Delhi in both prestige and technology, as sufficient to make the point that the regime's adherents are serious about enforcing its norms. These arguments have won over many in the international nonproliferation community, notably IAEA Director General and Nobel Laureate Dr. Mohamed ElBaradei And so while there is some grumbling within the NPT regime over the Deal, a revolt or collapse is not likely, and the damage to the regime can be limited.

As critics have exaggerated the nonproliferation costs of the nuclear part of the India Deal, so also its proponents have exaggerated its benefits in terms of energy security and nuclear security. Bush administration spokesmen have defended the Deal's nuclear power provisions as critical to stopping India's rise from posing an oil and environmental crisis. But this claim does not survive close scrutiny. Energy security is terribly important to both India and the United States. All want India's huge population to satisfy its energy needs, which will grow faster than its GDP, increasing as much as fourfold within 25 years, without contributing further to dependence on Middle East oil, pollution, and global warming. But the arithmetic does not support the case that nuclear power will add up to make the critical 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 whereas nuclear plants (which today produce only 3% of India's electricity) will remain a single-digit contributor even under the most extravagant projections of U.S.-assisted nuclear expansion in India. Indian coal is plentiful but of poor quality and highly polluting. Burn-

ing coal more cheaply and more cleanly will do more than any conceivable expansion of nuclear power to aid India's economy and the environment. India's share of world oil consumption will grow from 3% to 4% over the next twenty years. But 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. Finally, the type of assistance the United States is best positioned to provide to India's nuclear generation capacity (light water reactors operating on low-enriched uranium fuel) is at odds with the Indian establishment's uneconomical vision of a civil nuclear power program built primarily around breeder reactors.

The administration also claims 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 at the same time, the administration acknowledges India's apparently excellent 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 Delhi has sold the same horse a second time in the Deal. In any event, the United States is justifying 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 for the U.S. to argue this point both ways at the same time.

What Washington Should Get

What is it then that the United States might expect from the "strategic partnership" in return for the nuclear recognition it conferred upon India?

First and foremost, the United States should expect India to serve as a potential future Asian 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 U.S.-China relations will depend on the attitudes of China's younger generation and new leaders, on Chinese and U.S. 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 both are intent on improving their 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.

Second, the U.S. will want Indian assistance in a range of possible contingencies involving neighboring Pakistan—another common interest that is awkward for either party to the Deal to acknowledge. Pakistan, alongside Russia, belongs at the very center of urgent concern about nuclear terrorism. Terrorists cannot make nuclear bombs unless they obtain enriched uranium or plutonium from governments that 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 such materials—whether by theft, sale, diversion by internal radical elements with access to bombs or materials, change of government from Mushanaf 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 than the China counterweight contingency for the newly-minted strategic partners in Washington and Delhi to acknowledge. India seems intent on improving its relations with Pakistan—despite last year's bombings in Delhi and their impact on Indian 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 towards India." For now, therefore, the Pakistan contingency, like the China counterweight, remains a hypothetical and future benefit of the India Deal.

Third, and most urgently, India should be expected to weigh in against Iran's nuclear ambitions and to compromise to a considerable extent its friendly relations with Iran in the interests of nonproliferation. Whether Delhi does this will be the clearest test of whether nuclear recognition "brings India into the nuclear mainstream," as the Bush administration predicts, or whether India persists in its pre-Deal (actually, Cold war) positions of rhetorical support for the spread of nuclear fuel-cycle activities (uranium enrichment and plutonium reprocessing). India's Sep-

tember 24, 2005 and February 4, 2006 votes with the United States and its European partners in the IAEA Board of Governors, finding Iran in noncompliance with its NPT obligations and referring the matter to the United National Security Council were a welcome suggestion that India will support the international campaign to curb Iran's nuclear ambitions. But India's willingness truly to join the nuclear club, reversing old non-aligned habits and putting its diplomatic shoulder to the wheel in the case of Iran and other urgent counter-proliferation efforts will be an early and major test of the value of strategic partnership and its new status.

Fourth, the United States should expect a continued intensification of Indo-U.S. military-to-military contacts, ultimately envisioning joint action in operations outside of a United Nations context. India has historically refused to join the United States military in operations that were not mandated and commanded by the United Nations. 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 U.S. security partnerships in Asia and Europe (especially NATO's expanded membership and 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 U.S.-India strategic partnership in the defense field. Additionally, there could be occasions when access for and, if needed, basing of U.S. military forces on Indian territory would be desirable. At first this might be limited to port access for U.S. naval vessels transiting the Indian Ocean and overflight rights for U.S. military aircraft, but in time it could lead to such steps as use of Indian training facilities for U.S. forces deploying to locations with similar climate (the way German training areas were used for forces deploying to the Balkans). Ultimately, India could provide U.S. forces with "over-the-horizon" basing for Middle East contingencies of the sort preferred by Saudi Arabia and other Gulf states.

Fifth, the United States will expect preferential treatment for U.S. industry in India's civil nuclear expansion and modernization of its military. The authors of the India Deal might have anticipated preferential treatment for U.S. 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. 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 U.S. 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.

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 common national 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 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 there is a risk that when the United States comes to ask India to do something it is reluctant to do, that it comes to regret having played its big diplomatic card—nuclear recognition—so early in the process.

India, as befits a great nation on its way to global prominence, 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 U.S. 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. This expectation is naive. Americans view the change of long-standing and principled nonproliferation policy to accommodate India as a concession. Indians view it as acknowledgement of something to which they have long been entitled. This is not a durable basis for a diplomatic transaction.

It is therefore premature to judge whether the expectations of this strategic partnership as apparently foreseen on the U.S. side are shared by India and will, in fact, materialize. The Deal itself was premature. The risk with a hastily prepared diplomatic initiative is that disenchantment will set in on both sides. 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, very much, Secretary Carter.

Let me just mention, as a personal reference, Ash Carter provided a—it was longer than a memo—really, a tract that was the basis for the Senate meeting of, in a bipartisan way, Republicans and Democrats, that brought about the Nunn-Lugar Cooperative Threat Reduction Act. And after not much occurred during the previous Bush administration, that of George Herbert Walker Bush, we took an airplane trip to Russia and Ukraine early in 1992, and both Ash Carter and Bill Perry were onboard, in their private capacities. They were later to come into the Government in the service of President Clinton's administration in distinguished ways. But I simply pay tribute to them, to begin with, in the spirit of strong bipartisanship, but especially for their interest in nonproliferation that impelled that kind of leadership then, as well as the administration's. That is why you're valued as witnesses today. We listen to you with a great deal of respect.

I'd like to now recognize Secretary Perry for his testimony.

STATEMENT OF HON. WILLIAM J. PERRY, SENIOR FELLOW, HOOVER INSTITUTION, STANFORD UNIVERSITY, STANFORD, CA

Dr. PERRY. Thank you, Mr. Chairman. I will be brief, and I will organize my views in three related points.

The first point is, I enthusiastically support the development of a strategic partnership between the United States and India, of which this agreement could be an important step. The benefits of a strategic partnership were convincingly outlined in the earlier testimony of Secretary Rice to this committee. I associate myself with her views on the importance of a strategic partnership. In particular, I expect that this could include a robust military-to-military partnership, including, for example, joint exercises in humanitarian relief operations, in responding to emergencies at sea, and in peacekeeping operations. Those exercises could be modeled after the comparable exercises conducted in Europe by the Partnership for Peace.

My second point, I understand the need of India to aggressively develop nuclear power for their growing industrial base, and I believe that the United States should support India in that development.

The importance of nuclear power to India and to the global environment were convincingly outlined by Dr. David Victor in his op-

ed piece in the International Herald Tribune on 17 March. And I commend this to the committee. I associate myself with Dr. Victor's views on this subject.

My third point, I am disappointed that the United States did not seize the opportunity presented in the formulation of this agreement to undertake a joint program with India directed at preventing the spread of nuclear weapons. Stopping nuclear proliferation is an important American objective. It is an important international objective. And it should be an important Indian objective. I believe that it is not too late to join forces with India to further this critical objective.

I'd like to highlight four actions that India could take that would make a significant difference in preventing the spread of nuclear weapons.

First, India could join other nuclear powers in implementing strong controls on the transfer of nuclear technology and materials.

Second, India could take a leadership position in promoting an international cutoff in the production of fissile material.

Third, India could cooperate with the United States and the EU–3 in pressuring Iran to stop the programs that are facilitating an Iranian nuclear bomb.

And, fourth, India could explicitly reaffirm its intention of limiting its nuclear arsenal to minimal deterrence levels.

Secretary Rice, in her testimony, has suggested that India is prepared to take many of these actions, but they are not an explicit part of the agreement. I do not recommend that the Senate try to modify the agreement to include them. Instead, I recommend that the Senate task the administration to vigorously pursue continuing diplomacy to facilitate these actions, and that should be as a follow-on to the agreement. Indeed, I believe that these actions are strongly in the interest of India, and I believe that the Indian Government understands that.

What is the motivation—what is the incentive that the administration would have to actually carry out this diplomacy? First of all, they are in India's interest. And, second, only—only if India moves aggressively to carry out these actions will they be providing the foundation on which the strategic partnership desired by both countries can, in fact, be achieved.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Perry follows:]

PREPARED STATEMENT OF HON. WILLIAM J. PERRY, SENIOR FELLOW, HOOVER INSTITUTION, STANFORD UNIVERSITY, STANFORD, CA

My views on the recently concluded Civilian Nuclear Cooperation Agreement between India and the United States can be summarized in three points.

First, I enthusiastically support the development of a strategic partnership between the United States and India, of which this agreement could be an important step. The benefits of a strategic partnership were convincingly outlined in the earlier testimony of Secretary Rice to this committee. I associate myself with her views on the importance of a strategic partnership. In particular, I expect that this could include a robust military-to-military partnership, including, for example, joint exercises in humanitarian relief operations, in responding to emergencies at sea, and in peacekeeping operations. Those exercises could be modeled after the comparable exercises conducted in Europe by the Partnership for Peace.

Second, I understand the need of India to aggressively develop nuclear power for its growing industrial base, and I believe that the United States should support India in that development. The importance of nuclear power to India and to the

global environment were convincingly outlined by Dr. David Victor in his op-ed piece in the International Herald Tribune on 17 March. And I commend this to the committee. I associate myself with Dr. Victor's views on this subject.

Third, I am disappointed that the United States did not seize the opportunity presented in the formulation of this agreement to undertake a joint program with India directed at preventing the spread of nuclear weapons. Stopping nuclear proliferation is an important American objective. It is an important international objective. And it should be an important Indian objective. I believe that it is not too late to join forces with India to further this critical objective.

I'd like to highlight four actions that India could take that would make a significant difference in preventing the spread of nuclear weapons:

First, India could join other nuclear powers in implementing strong controls on the transfer of nuclear technology and materials.

Second, India could take a leadership position in promoting an international cutoff in the production of fissile material.

Third, India could cooperate with the United States and the EU-3 in pressuring Iran to stop the programs that are facilitating an Iranian nuclear bomb.

And, fourth, India could explicitly reaffirm its intention of limiting its nuclear arsenal to minimal deterrence levels.

Secretary Rice, in her testimony, has suggested that India is prepared to take many of these actions, but they are not an explicit part of the agreement. I do not recommend that the Senate try to modify the agreement to include them. Instead, I recommend that the Senate task the administration to vigorously pursue continuing diplomacy to facilitate these actions, and that should be as a follow-on to the agreement. Indeed, I believe that these actions are strongly in the interest of India, and I believe that the Indian Government understands that.

What is the motivation—what is the incentive that the administration would have to actually carry out this diplomacy? First of all, they are in India's interest. And, second, only if India moves aggressively to carry out these actions will they be providing the foundation on which the strategic partnership desired by both countries can, in fact, be achieved.

The CHAIRMAN. Thank you very much, Secretary Perry.

I want to recognize, now, Dr. Gallucci, who has had a long career in public service, and particularly in dealing with the problems in North Korea.

We really look forward to your testimony. Please proceed.

STATEMENT OF HON. ROBERT L. GALLUCCI, DEAN, EDMUND A. WALSH SCHOOL OF FOREIGN SERVICE, GEORGETOWN UNIVERSITY, WASHINGTON, DC

Ambassador GALLUCCI. Thank you, Mr. Chairman, and thank you for this opportunity to testify on the national security implications of the proposed United States-India agreement on civil nuclear cooperation.

Mr. Chairman, in this brief statement, I wish to make only three points. The first is that those who advocate making this special arrangement to permit nuclear cooperation with India ought to be clear and honest about why they are doing so. The second is that the reasons for making the particular deal they proposed, while important, do not justify the cost to the national security of doing so. And, third, that there is an arrangement which would, in fact, strike the right balance between competing national security interests, an arrangement that may be negotiable at some future time, if not now.

The United States has good reasons for improving its relations with India, both political and economic. If this is obvious, so, also, is the chronic irritant that our nonproliferation policy has been to United States-India relations over the last 30 years.

We should acknowledge the importance that India attaches to American willingness to change that policy so that the United

States can begin to sell its nuclear equipment, material, and technology. We should also admit that the proposed deal would grant what New Delhi values most, namely, our acceptance of India as a nuclear weapons state. And, while we're at it, we should admit that, although the deal would be critically important to our goal of improving relations with India, it will really do nothing to help us deal with the risks posed by the proliferation of nuclear weapons. Assertions to the contrary, I think, are less than forthright.

There is no reason why we should attach any positive value to India's willingness to submit a few additional nuclear facilities of its choosing to international safeguards, so long as other fissile material producing facilities are free from safeguards. This move has been called symbolic by critics, but it is not at all clear what useful purpose it symbolizes. The other elements of the deal that are supposed to contribute to its nonproliferation value were in place before the deal was struck.

The first point, then, is that the administration proposes this deal to address a genuine regional security objective, and not because it helps, in any way, our global security concern over nuclear proliferation.

The second point is that the proposed arrangement will be too costly to the national security to be justified by the gain in relations with India.

Mr. Chairman, since the dawn of the nuclear age and the arrival of intercontinental ballistic missiles, our Nation has been defenseless against devastating attack, leaving us to rely on deterrents—the promise of retaliation—to deal with nuclear-armed enemies. From the beginning, we recognized that this left us vulnerable to anyone who could not be deterred; and so, in some basic way, our security depended on limiting the number of countries who ultimately acquired nuclear weapons. Most analysts believe that 50 years of nonproliferation policy has something to do with explaining why the spread of nuclear technology has not led to the proliferation of nuclear weapons, why we live in a world of eight or nine nuclear weapons states, rather than 80 or 90.

A key part of that policy has been our support for an international norm captured in the very nearly universally adhered to Nuclear Non-Proliferation Treaty. The norm is simple. In the interest of international security, no more states should acquire nuclear weapons. There are many provisions in the treaty, and details to be understood, to fully appreciate the norm, but that is its essence.

Certainly, the fact that we have eight or nine states with nuclear weapons, rather than only the original five, means that the norm has not held perfectly well, but it has had substantial force in the face of widespread acquisition of critical nuclear technologies, and that has been vital to America's security. Simply put, the administration now proposes to destroy that norm.

Some claim the deal would only recognize the reality of India's nuclear weapons program. But that's not accurate. Recognizing that India and a few additional countries have acquired nuclear weapons over the last three decades is not the issue. The damage will be done to the nonproliferation norm by legitimizing India's condition, by exempting it from a policy that has held for decades. And we would do this, we assert, I think less than honestly be-

cause of India's exceptionally good behavior. In truth, we would reward India with nuclear cooperation, because we now place such a high value on improved relations with New Delhi, not because of its uniquely good behavior.

Critics ask: If we do this deal, how will we explain, defend, and promote our policy of stopping Iran's proposed uranium enrichment program? Iran is, after all, a party to the Nuclear Non-Proliferation Treaty, and has, as far as we know, no fissile material outside of international safeguards and has never detonated a nuclear explosive device. A good question, but not the best one, because India has arguably been a more responsible member of the international community than Iran. Rather, if we do this deal, ask how we will avoid offering a similar one to Brazil or Argentina, if they decide on a nuclear weapons acquisition, or our treaty ally, South Korea. Dozens of countries around the world have exhibited good behavior in nuclear matters and have the capability to produce nuclear weapons, but chose not to, at least in part because of the international norm against nuclear weapons acquisition, reinforced by a policy we would now propose to abandon.

Will we legitimize only India because it never joined the NPT, and thus did not have to withdraw from it to pursue nuclear weapons? No, if India was truly unique, there might not be much risk to that nonproliferation norm we so depend upon. But it is not unique. The deal would set a dangerous precedent. If we do this, we will put at risk a world of very few nuclear weapons states and open the door to the true proliferation of nuclear weapons in the years ahead.

Finally, if there are two national security objectives in conflict here—one regional and one global—the question is: Is it possible to reconcile them? The answer, I think, is probably, "Yes"; but not now, not in the current context. Clearly, and, I think, regrettably, if the administration's proposal does not succeed in much the same form in which it has been put forth, United States-India relations will deteriorate, for a time. But acknowledging that does not mean that we should go ahead with a deal that would do irreparable damage to our long-term national security interests. Instead, we should put forth a proposal that more clearly balances regional and global security interests, recognizing that it will be some time, at best, before it will appeal to New Delhi.

The proposal would permit nuclear cooperation with India, if India accepts reasonably verifiable ban on the production of any more fissile material for nuclear weapons purposes. The approach would permit India reprocessing and enrichment facilities, but effectively require international safeguards on all its nuclear facilities and any nuclear material produced in the future.

Its appeal, in regional terms, is that it would allow India to pursue nuclear energy without restrictions of any kind, more than we are willing to do, by the way, for Iran, at the moment.

From the global security perspective, we will have succeeded in capping a nuclear weapons program, a substantive achievement which arguably offsets a breach of the longstanding policy against nuclear cooperation with a state such as India that does not accept full-scope safeguards. The deal would have to have other provisions, such as rigorous nuclear export control policies, a ban on ex-

port of enrichment and reprocessing technology, and a permanent prohibition on nuclear explosive testing. But that would be its essence.

The deal described above would require India to choose between the opportunity to expand its nuclear energy program, on the one hand, and the expansion of its nuclear weapons arsenal, on the other. The administration proposes to allow India to do both. And that would be a mistake. Our security depends on maintaining that norm against the proliferation of nuclear weapons.

Thank you, Mr. Chairman.

[The prepared statement of Ambassador Gallucci follows:]

PREPARED STATEMENT OF HON. ROBERT L. GALLUCCI, DEAN, EDMUND A. WALSH SCHOOL OF FOREIGN SERVICE, GEORGETOWN UNIVERSITY, WASHINGTON, DC

In this brief statement, I wish to make only three points. The first is that those who advocate making this special arrangements to permit nuclear cooperation with India ought to be clear—and honest—about why they are doing so. The second is that the reasons for making the particular deal they propose, while important, do not justify the cost to the national security of doing so. And third, that there is an arrangement which would, in fact, strike the right balance between competing national security interests, an arrangement that may be negotiable at some future time, if not now.

The United States has good reasons for improving its relations with India, both political and economic. Part of the calculation must turn on our uncertainties about China, about whether Beijing will turn out to be more of a strategic competitor than partner in the decades ahead. If internal developments in China do not proceed as we hope, and if Chinese foreign policy turns out to be more hegemonic than we expect, a solid political relationship with India could be important to our security. Moreover, independent of such considerations, India's enormous and growing economic and political importance make the improvement of relations with New Delhi a prudent objective for the United States.

If this is obvious, so also is the chronic irritant that our nonproliferation policy has been to U.S.-India relations over the last 30 years. We should acknowledge the importance that India attaches to American willingness to change that policy so that the United States can begin to sell it nuclear equipment, material and technology. We should also admit that the proposed deal would grant what New Delhi values most, namely our acceptance of India as a nuclear weapons state. And while we are at it, we should admit that although the deal would be critically important to our goal of improving relations with India, it will really do nothing to help us deal with the risks posed by the proliferation of nuclear weapons. Assertions to the contrary are less than honest.

There is no reason why we should attach any positive value to India's willingness to submit a few additional nuclear facilities of its choosing to international safeguards, so long as other fissile material producing facilities are free from safeguards. This move has been called "symbolic" by critics, but it is not at all clear what useful purpose it symbolizes. The other elements of the deal that are supposed to contribute to its nonproliferation value were in place before the deal was struck. The first point then, is that the administration proposes this deal to address a genuine regional security objective and not because it helps in any way our global security concern over nuclear proliferation.

The second point is that the proposed arrangement will be too costly to the national security to be justified by the gain in relations with India.

Since the dawn of the nuclear age and the arrival of intercontinental ballistic missiles, our nation has been defenseless against devastating attack—leaving us to rely on deterrence, the promise of retaliation, to deal with nuclear armed enemies. From the beginning, we recognized that this left us vulnerable to anyone who could not be deterred, and so, in some basic way, our security depended on limiting the number of countries who ultimately acquired nuclear weapons. Most analysts believe that 50 years of nonproliferation policy has something to do with explaining why the spread of nuclear technology has not led to the proliferation of nuclear weapons, why we live in a world of 8 or 9 nuclear weapons states, rather then 80 or 90. A key part of that policy has been our support for an international norm captured in the very nearly universally adhered to Nuclear Non-Proliferation Treaty (NPT). The norm is simple: In the interest of international security, no more states should ac-

quire nuclear weapons. There are many provisions in the treaty and details to be understood to fully appreciate the norm, but that is its essence. Certainly the fact that we have eight or nine states with nuclear weapons rather than only the original five, means that the norm has not held perfectly well. But it has had substantial force in the face of widespread acquisition of critical nuclear technologies, and that has been of vital importance to America's security. Simply put, the administration now proposes to destroy that norm.

Some claim the deal would only recognize the reality of India's nuclear weapons program. But that is not accurate. Recognizing that India and a few additional countries have acquired nuclear weapons over the last three decades is not the issue. The damage will be done to the nonproliferation norm by legitimatizing India's condition, by exempting it from a policy that has held for decades. And we would do this, we assert less than honestly, because of its exceptionally good behavior. In truth, we would reward India with nuclear cooperation because we now place such a high value on improved relations with New Delhi, not because of its uniquely good behavior.

Critics ask, if we do this deal, how will we explain, defend, and promote our policy of stopping Iran's proposed uranium enrichment program? Iran is, after all, a party to the Nuclear Non-Proliferation Treaty, and as far as we know, has no fissile material outside of international safeguards and has never detonated a nuclear explosive device. A good question, but not the best one because India has arguably been a more responsible member of the international community than Iran. Rather, if we do this deal, ask how we will avoid offering a similar one to Brazil or Argentina if they decide on nuclear weapons acquisition, or our treaty ally, South Korea. Dozens of countries around the world have exhibited good behavior in nuclear matters, and have the capability to produce nuclear weapons but choose not to, at least in part, because of the international norm against nuclear weapons acquisition reinforced by a policy we would now propose to abandon. Will we legitimatize only India because it never joined the NPT and thus did not have to withdraw from it to pursue nuclear weapons? No, if India was truly unique, there might not be much risk to that nonproliferation norm we so depend upon, but it is not unique: The deal would set a dangerous precedent. If we do this, we will put at risk a world of very few nuclear weapons states, and open the door to the true proliferation of nuclear weapons in the years ahead.

Finally, if there are two national security objectives in conflict here, one regional and the other global, is it possible to reconcile them? The answer is probably yes, but not now, not in the current context. Clearly and regrettably, if the administration's proposal does not succeed in much the same form in which it has been put forth, U.S.-India relations will deteriorate for a time. But acknowledging that does not mean that we should go ahead with a deal that would do irreparable damage to our long-term national security interests. Instead, we should put forth a proposal that more nearly balances regional and global security interests, recognizing that it will be some time, at best, before it will appeal to New Delhi.

In looking for that balance, we should understand that there is something of a continuum to be considered in terms of nonproliferation provisions. At one end, for purists, is nothing less than Indian adherence to the NPT. This is nearly impossible to foresee. Next, for nonproliferation realists, is an Indian commitment to end fissile material production for any purpose and forego those facilities, enrichment and reprocessing, that yield it. This would leave India with nuclear weapons, but no means to produce the material to make more. Significantly, it would also deny India the option of exploring breeder reactor technology, something the Indian nuclear energy establishment very much wants to do.

Finally, there is a more practical posture, which is to permit nuclear cooperation with India if it accepts a reasonably verifiable ban on the production of any more fissile material for nuclear weapons purposes. This approach would permit India reprocessing and enrichment facilities, but effectively require international safeguards on all its nuclear facilities and any nuclear material produced in the future. Its appeal in regional terms is that it would allow India to pursue nuclear energy without restrictions of any kind—more than we are willing to do for Iran at the moment. From the global security perspective, we will have succeeded in capping a nuclear weapons program, a substantive achievement which arguably offsets a breach of the longstanding policy against nuclear cooperation with a state such as India that does not accept full-scope safeguards. The deal would have to have other provisions, such as rigorous nuclear export control policies, a ban on export of enrichment or reprocessing technology, and a permanent prohibition on nuclear explosive testing, but this is its essence.

The deal described above would require India to choose between the opportunity to expand its nuclear energy program on the one hand, and the expansion of its nu-

clear weapons arsenal on the other. The administration proposes to allow India to do both, and that would be a mistake. Our security depends on maintaining the norm against nuclear weapons proliferation.

The CHAIRMAN. Well, thank you very much, Dr. Gallucci.

We now look forward to the testimony of Dr. Ashley Tellis.

Would you please proceed?

STATEMENT OF DR. ASHLEY J. TELLIS, SENIOR ASSOCIATE, CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE, WASHINGTON, DC

Dr. TELLIS. Thank you, Mr. Chairman.

Thank you for inviting me to testify this morning on the issue of atomic energy cooperation between the United States and India. This is a complex subject, and I have written extensively about it.

What I want to do this morning is really focus on just one aspect of the agreement, which is the strategic logic that underlies the President's initiative and its importance for transforming the relationship between our two countries.

I think the United States and India today are confronted by a tremendous opportunity to craft a new global partnership, an opportunity that eluded us throughout the cold war and eluded us, in large measure, because both our countries were unable to reconcile the problems caused by India's anomalous status in the global nonproliferation order.

I think it's really to the Clinton administration's credit that it tried to improve United States-India relations in order to serve American national interests by first trying to quarantine the nuclear issue while improving relations in all other areas to the degree possible. When this approach did not bear much fruit, the administration then shifted to a strategy of trying to cap, roll back, and eventually eliminate India's nuclear program. Both these approaches, unfortunately, were less than successful.

I remind the committee of this history only because it underlines two important realities that we must keep in mind when we think about how we can engage India in a new relationship.

The first is that the transformation of the bilateral relationship will not occur unless we find a solution to resolving India's anomalous status in the global nonproliferation order, to make it part of the regime that serves our common interests.

The second is that we cannot transform the bilateral relationship so long as, on one hand, we seek to make India a partner of the United States, while, on the other hand, it continues to remain a target of our nonproliferation efforts.

It is these two elements that essentially have caused the tension in our inability to transform the relationship in the last two decades. And, for that reason, I believe Secretary Rice, in her recent testimony to this committee, emphasized the fact that civilian nuclear cooperation today now becomes the key to unlock the progress in our expanding relationship.

Prime Minister Manmohan Singh told Under Secretary Burns, in Delhi, during our negotiations on the separation plan, that the most important reason for this agreement, in his mind, was that it would signify a historic reconciliation between the United States and India, and a new concord after many decades of anxiety, dis-

trust, and suspicion in our bilateral relations. I think these are noble thoughts, but I want to emphasize something else, that the reason why I believe Congress ought to support the agreement, ultimately, is because it advances, not simply a reconciliation with India, but three very important American national security interests.

The first of these is that it is in America's interest to have a strong democratic India that serves as a full partner in an Asia that threatens to become more and more important to the United States over time. Civil nuclear cooperation is just one element in our effort to increase the growth of Indian power, to strengthen the economic foundations of India's democracy, and help it play the partnership role that we want in establishing a stable Asian order. This is part, I believe, of a larger U.S. effort to deepen our relations with all Asian countries, but particularly the democratic states in that continent.

The second reason for why I hope Congress will endorse the President's initiative is because it is an integral part of constructing an effective nonproliferation regime.

The civil nuclear agreement here is important for a very critical reason, because it embodies a bargain which allows India to become part of the nonproliferation order through formal commitments to the international system. I agree with all my preceding panelists this morning when they urge us to consider the fact that India's record of nonproliferation has been good. That is true. But it is a good record that has been undertaken purely as a result of unilateral actions.

What this agreement seeks to do is transform those unilateral commitments into binding international obligations; in effect, shutting the door for any future Indian Government to change its mind were circumstances to provoke such choices.

The third, and final, I think, why we ought to support this agreement with India is because it is part of a process to create a global order that protects liberal societies and advances freedom in so many ways: Promoting democracy, defeating terrorism, collaborating to protect energy routes, expanding trade and the international economic system. All these are objectives where Indian partnership with the United States is critical to successful outcomes.

I think the President's proposal for full nuclear cooperation is driven ultimately by a conviction that it is time to remove the last remaining impediment to closer relations between our two countries. The question is often asked whether, in the absence of such an agreement, the United States-Indian partnership, on all other issues, would decay. The unfortunate answer to that question is, "Yes." This is not to say that United States-Indian collaboration will suddenly evaporate if civil nuclear cooperation cannot be consummated, but it does emphasize that such cooperation would turn out to be hesitant, troubled, episodic, and unable to realize its full potential, in much the same way as we have seen our relationship for the last 30 years.

I think what this initiative in final represents, is really a bold and decisive step. It is possible to conceive of many other agreements with India which might have turned out to be better than

the one we have. But, in my judgment, the agreement that we finally reached is really the best possible deal that protects both core American and Indian vital national interests. No other deal was possible.

And, therefore, comparing this deal, which is the best deal we can enjoy, in reality with other agreements that might have been possible, in principle I'm afraid would not take us to where we want to go, which is a closer relationship with a democratic power that has a trustworthy record and will become an important partner for the United States in the coming century.

Thank you very much, Mr. Chairman.

[The prepared statement of Dr. Tellis follows:]

PREPARED STATEMENT OF DR. ASHLEY J. TELLIS, SENIOR ASSOCIATE, CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE, WASHINGTON, DC

Good morning, Mr. Chairman, and Members of the committee. Thank you for inviting me to testify on the proposed cooperation between the United States and India in regards to atomic energy. This is obviously a complex subject with different facets stretching from the political to the technical. It is also a subject I have given some thought to and have written about in the past.[1] As requested in your letter, I will focus my oral and written remarks this morning mainly on the strategic logic underlying the President's initiative on civil nuclear cooperation and its importance for the transforming U. S.-Indian relationship. I will be happy, however, to cover those aspects that I have not touched on in my formal testimony during the discussion that follows. I respectfully request that my statement be entered into the record.

The United States and India today are confronted by an incredible opportunity to craft a new global partnership that promises to advance a range of common interests in a way that was simply impossible during the Cold War. These interests encompass a wide variety of issues ranging from the preservation of peace and stability in a resurgent Asia over the long term, through the current exigencies relating to the global war on terror, to promoting complex collective goods such as arresting the spread of weapons of mass destruction, managing climate change, and promoting liberal democracy and an open trading system.

Thanks to the tight bipolarity of the Cold War, U.S.-Indian relations during that entire epoch were characterized by alternation: in almost every decade, troughs of estrangement invariably followed peaks of strong cooperation. Despite the desires of leaders on both sides, the quest for a strong bilateral relationship was repeatedly frustrated, which from an American perspective appeared to be the case for at least three reasons unique to India: first, New Delhi's emphatic determination to pursue a non-aligned foreign policy at a time when liberal states were under threat from global communism; second, India's relative weakness during much of the Cold War caused by its pervasive economic underperformance that, in turn, sealed its strategic irrelevance to the global system; and, third, India's anomalous nuclear status since 1974 when, in becoming "a state with nuclear weapons, but not a nuclear weapon state," New Delhi found itself cast into a netherworld where it soon became the most important target of global anti-proliferation efforts.

By the time the Cold War ended, the first two impediments were on their way to being resolved. The demise of the Soviet Union destroyed the international system that made non-alignment structurally relevant and freed both the United States and India to seek better relations undistracted by the pressures of Cold War geopolitics. By 1991—and although it was difficult to see this clearly at the time because of New Delhi's financial crisis—the Indian economy was also on its way to

[1] My previous reflections on different aspects of the U.S.-Indian nuclear cooperation initiative can be found in Ashley J. Tellis, "South Asian Seesaw: A New U.S. Policy on the Subcontinent," Policy Brief, 38 (Washington, D.C.: Carnegie Endowment for International Peace, May 2005); Ashley J. Tellis, "India as a New Global Power: An Action Agenda for the United States" (Washington, D.C.: Carnegie Endowment for International Peace, June 2005); Ashley J. Tellis, Testimony to the House Committee on International Relations, Subcommittee on Asia and the Pacific, on "The United States and South Asia," June 14, 2005; Ashley J. Tellis, "Should the US Sell Nuclear Technology to India?—Part II," YaleGlobal Online, November 10, 2005; and, Ashley J. Tellis, Prepared Testimony to the House Committee on International Relations on "The U.S.-India 'Global Partnership': How Significant for American Interests?" November 16, 2005.

becoming a star performer, having left behind the abysmal 3.5 percent "Hindu rate of growth" that had characterized its productive performance since independence.

To its credit, the Clinton administration, perceiving both these realities, made an initial effort to construct a new relationship with India. A wide-ranging diplomatic dialogue was instituted in the hope that the two democracies could find common ground, and India was designated a "big emerging market" worthy of special U.S. commercial attention. But, despite its good intentions, the Clinton administration could not redress the third impediment that had by now come to haunt U.S.-Indian relations, namely India's anomalous nuclear status which made it the single most important target of U.S. anti-proliferation activities worldwide. Confronted by this challenge, the administration attempted to implement two different policies towards India. It began with an effort to improve ties with New Delhi across the board, while simply quarantining the nuclear issue in the hope of preventing it from contaminating improvements that might be realized in other areas of the bilateral relationship. This approach, however, quickly reached the limits of its success because the U.S.-led anti-proliferation efforts since 1974 had effectively succeeded in institutionalizing a complex global technology denial regime that prevented India from getting access even to important non-strategic technologies because of fears that these might eventually leach into its nuclear programs. India's irregular nuclear status under the Non-Proliferation Treaty had in fact become such an impediment that the Clinton administration's strategy of quarantining the nuclear issue failed either to resolve the nuclear disagreement or to transform the bilateral relationship.

By the second term, the Clinton administration emphasized an alternative strategy, driven largely by its efforts to tighten the global nonproliferation regime. While continuing its previous effort to improve relations with India in a variety of areas such as diplomatic engagement and defense cooperation, the administration focused its energies simultaneously on capping, rolling back, and eventually eliminating India's nuclear weapons program. This shift in emphasis, unfortunately, turned out to be unsuccessful: not only did it exacerbate the already high Indian frustration with the U.S.-led technology denial regime, but it finally provoked New Delhi into a spectacular act of defiance through the nuclear test series of 1998 when India in a deliberate challenge to the international order declared itself to be a "nuclear weapon state."

Although much of this story may sound like ancient history, it is worth remembering for two important reasons that are critical to understanding the strategic wisdom underlying President Bush's decision to initiate civilian nuclear cooperation with India.

First, the transformation of U.S.-Indian relations, as desired by the President and which enjoys bipartisan support in Congress, cannot be consummated without resolving the problems caused by India's anomalous status in the nuclear non-proliferation order. The Clinton administration spent eight long years trying to improve U.S. relations with India, while at the same time avoiding any effort to alter India's status as an outlier in the global non-proliferation system. The historical record shows conclusively that well intentioned though it was—and perhaps even necessary—this strategy ultimately failed. An old maxim of military strategy calls on leaders to "reinforce success, abandon failure." President Bush's initiative on civil nuclear cooperation with India is an effort to do just that, given that all other U.S. policies since at least 1974 have by now proven to be less than successful.

Second, the transformation of U.S.-Indian relations, as desired by the President and which enjoys bipartisan support in Congress, cannot be inherently schizophrenic if it is to be successful enough to advance common American and Indian interests in this new century. As our ties with friends and allies in Europe and Asia demonstrate, the United States has a variety of bilateral relationships defined by different degrees of intensity and intimacy. What all these relationships have in common, however, is that in no case is any U.S. partner made the deliberate target of a punitive policy concertedly pursued by Washington. Through his proposal for full civil nuclear cooperation with India, President Bush has in effect conveyed his belief that if India is to become a full strategic partner of the United States in this new century, a comparable courtesy must be extended to New Delhi as well. Stated in a different way, the President has recognized that it is impossible to pursue a policy that simultaneously seeks to transform New Delhi into a strategic partner of the United States on the one hand, even as India remains permanently anchored as Washington's nonproliferation target on the other.

These two reasons combine to underscore the point that Secretary Rice made in her recent testimony to this committee. Far from being an appendage to growing U.S.-Indian ties, bilateral civilian nuclear cooperation promises to become "the key that will unlock the progress of our expanding relationship." Congressional action to implement this initiative is therefore critical not simply because it will help ad-

dress India's vast and growing energy needs—though it will certainly do that—or because it will mitigate the burdens of environmental pollution and climate change in South Asia—though those must be counted among its benefits as well—but because it symbolizes, first and foremost, a renewed American commitment to assisting India meet its enormous developmental goals and thereby take its place in the community of nations as a true great power.

Renewed civilian nuclear cooperation thus becomes the vehicle by which the Indian people are reassured that the United States is a true friend and ally responsive to their deepest aspirations. By altering the existing web of legal constraints on civilian nuclear cooperation with India, Congress would also expand simultaneously India's access to a wide range of controlled technologies that are useful for numerous peaceful economic endeavors going beyond merely the production of electricity. The successful implementation of the civilian nuclear cooperation agreement would therefore epitomize'as Prime Minister Manmohan Singh told Under Secretary of State Nicholas Burns in New Delhi in February 2006—"a historic reconciliation between the United States and India and a new concord after many decades of anxiety, distrust, and suspicion in our bilateral relations."

The increasing value of this transforming bilateral relationship with India for the United States will be manifested most clearly in three areas that will be vitally important to American security in this century.

To begin with, a strong American partnership with a democratic India will be essential if we are to be able to construct a stable geopolitical order in Asia that is conducive to peace and prosperity. There is little doubt today that the Asian continent is poised to become the new center of gravity in international politics. Most analyses suggest that although national growth rates in several key Asian states—in particular Japan, South Korea, and possibly China—are likely to decline in comparison to the latter half of the Cold War period, the spurt in Indian growth rates, coupled with the relatively high though still marginally declining growth rates in China, will propel Asia's share of the global economy to some 43 percent by 2025, thus making the continent the largest single locus of economic power worldwide. An Asia that hosts economic power of such magnitude, along with its strong and growing connectivity to the American economy, will become an arena vital to the United States—in much the same way that Europe was the grand prize during the Cold War. In such circumstances, the administration's policy of developing a new global partnership with India represents a considered effort at "shaping" the emerging Asian environment to suit American interests in the twenty-first century.

This should not be interpreted as some kind of thinly veiled code signifying the polite containment of China, which many argue is in fact the administration's secret intention. Such claims are, in my judgment, erroneous. A policy of containing China is neither feasible nor necessary for the United States at this point in time. Further, it is not at all obvious that India, currently, has any interest in becoming part of any coalition aimed at containing China. Rather, the objective of strengthening ties with India is part of a larger—and sensible—administration strategy of developing good relations with all the major Asian states. As part of this general effort, it is eminently reasonable for the United States not only to invest additional resources in strengthening the continent's democratic powers but also to deepen the bilateral relationship enjoyed with each of these countries—on the assumption that the proliferation of strong democratic states in Asia represents the best insurance against intra-continental instability as well as threats that may emerge against the United States and its regional presence. Strengthening New Delhi and transforming U.S-Indian ties, therefore, has everything to do with American confidence in Indian democracy and the conviction that its growing strength, tempered by its liberal values, brings only benefits for Asian stability and American security. As Under Secretary of State Nicholas Burns succinctly stated in his testimony before the House International Relations Committee, "By cooperating with India now, we accelerate the arrival of the benefits that India's rise brings to the region and the world."

Further, a strong American partnership with a democratic India will be essential if we are to succeed in preserving an efective non-proliferation system that stems the difusion of nuclear materials and technologies required for the creation of nuclear weapons. The central component of civilian nuclear cooperation is critical in this regard because it formalizes a bargain that gives India access to nuclear fuel, technology, and knowledge on the condition that New Delhi institutionalizes stringent export controls, separates its civilian from its strategic facilities and places the former under safeguards, and assists the United States in preventing further proliferation. Bringing India into the global non-proliferation regime in this way produces vital benefits both for the United States and for all non-nuclear weapons states insofar as it transforms India's hitherto commendable nonproliferation record, which is owed entirely to voluntary sovereign decisions made by successive Indian

governments, into a formal and binding adherence through a set of international agreements. Thanks to the President's initiative, India has now agreed to obligations that in fact go beyond those ordinarily required of NPT signatories, such as refraining from transfers of enrichment and reprocessing technologies to states that do not already possess them and supporting efforts to limit their spread; working with the United States to conclude a multilateral Fissile Material Cutoff Treaty; continuing its unilateral moratorium on nuclear testing; and adhering to the Missile Technology Control Regime (MTCR) and the Nuclear Suppliers Group (NSG) guidelines.

Bringing India into the global nonproliferation regime through a lasting international agreement that defines clearly enforceable benefits and obligations not only strengthens American efforts to stem further proliferation but also enhances U.S. national security. The President's accord with India advances these objectives in a fair and direct way. It recognizes that it is unreasonable to ask India to continue to bear the burdens of contributing towards ensuring the viability of the global nonproliferation regime in perpetuity, while it suffers stiff and encompassing sanctions from that same regime. And so the President has asked the Congress to support his proposal to give India access to nuclear fuel, technology, and knowledge in exchange for New Delhi formally becoming part of the global coalition to defeat the proliferation of weapons of mass destruction. In other words, he offers India the benefits of peaceful nuclear cooperation in exchange for transforming what is currently a unilateral Indian commitment to nonproliferation into a formally verifiable and permanent international responsibility.

The fruits of this initiative are already in evidence, for example, in connection with India's strong support for the U.S.-led efforts to persuade Iran to live up to its freely accepted non-proliferation obligations. This Indian decision has not been easy because of New Delhi's otherwise good relations with Tehran. India and Iran share historical links that go back thousands of years; India and Iran played a pivotal role in ensuring the viability of the Northern Alliance in Afghanistan during the darkest days of Taliban rule; India remains one of Iran's most important customers for oil and natural gas, and it continues discussions with Islamabad and Tehran about the construction of a gas pipeline that would link the three countries and help meet India's large and growing energy needs. Many voices in the American debate on the civilian nuclear initiative have demanded that India curtail its economic and diplomatic links to Iran as the price of securing U.S. cooperation in regards to civilian nuclear energy. Such demands are unreasonable. The negotiations over the Iranian-Pakistani-Indian gas pipeline are unlikely to succeed simply because of economic considerations, but New Delhi is unlikely to concede to any demands that rupture its diplomatic and economic relationship with Tehran if these are seen to have no relationship with the issue of nuclear proliferation. On this score, India is likely to behave in a fashion identical to that of our close allies such as Japan and Italy. It will demand—as it has done thus far—that Tehran live up to its international non-proliferation commitments and obligations, and it will abide by any decisions made by the international community to enforce these responsibilities, but it is unlikely to unilaterally sacrifice its bilateral relationship with Iran in areas that are not perceived to have any connection with non-proliferation and which do not pose a threat to common security.

Finally, a strong American partnership with a democratic India will be essential if we are to successfully preserve a global order that protects liberal societies and advances freedom in myriad ways. This objective encompasses a congeries of diverse goals, including promoting democracy, defeating terrorism and religious extremism, collaborating to protect the energy routes and lines of communication supporting free trade and commerce, expanding the liberal international economic order, and managing climate change—each of which is critical to the well being of the United States. It does not take a great deal of imagination to recognize that for the first time in recent memory Indian and American interests on each of these issues are strongly convergent and that India's contribution ranges from important to indispensable as far as achieving U.S. objectives is concerned.

The President's intention in proposing civilian nuclear cooperation with India is fundamentally driven by his conviction that every impediment to a closer relationship ought to be eliminated, so that both our countries can enjoy the fullest fruits of an ever-tighter partnership in regards to each of the issues above. It is also driven by his desire to assist New Delhi's growth in power on the assumption that a strong democratic India would ultimately advance America's own global interests far better than a weak and failing India would. The key word, which the administration understands very well in this context, is "partnership." A strengthened bilateral relationship does not imply that India will become a treaty-bound ally of the United States at some point in the future. It also does not imply that India will become

a meek, compliant and uncritical collaborator of the United States in all its global endeavors. Rather, India's large size, its proud history, and its great ambitions, ensure that it will always pursue its own interests—just like any other great power.

During his recent visit to the United States in March this year, India's Foreign Secretary Shyam Saran, appealed to his American interlocutors to recognize that "when an open society like India pursues its own interests, this is more likely than not to be of benefit to the United States." If the President's views on India going back to the campaign in 2000 are any indication, George W. Bush had already reached this conclusion at least five years ago. In fact, every initiative involving India, beginning with the Next Steps in Strategic Partnership in the first term and ending up with the proposal on civilian nuclear cooperation in the second, suggest that the President has concluded—correctly—that a strong and independent India represents a strategic asset, even when it remains only a partner and not a formal ally. This judgment is rooted in the belief that there are no intrinsic conflicts of interest between India and the United States. And, consequently, transformed ties that enhance the prospect for consistent "strategic coordination" between Washington and New Delhi on all the issues of global order identified above serve U.S. interests just as well as any recognized alliance.

The question that is sometimes asked in this connection is whether a close U.S.-Indian partnership would be impossible in the absence of civilian nuclear cooperation. The considered answer to this question is "Yes." This is not to say that U.S.-Indian collaboration will evaporate if civilian nuclear cooperation between the two countries cannot be consummated, but merely that such collaboration would be hesitant, troubled, episodic, and unable to realize its full potential without final resolution of the one issue that symbolically, substantively, and materially kept the two sides apart for over thirty years. At a time when U.S.-Indian cooperation promises to become more important than ever, given the threats and uncertainties looming in the international system, the risk of unsatisfactory collaboration is one that both countries ought not to take.

Through the civilian nuclear cooperation initiative, President Bush has embarked on a bold and decisive step to eliminate those long-standing impediments between Washington and New Delhi and to place the evolving U.S-Indian relationship on a firm footing guided by a clear understanding of the geo-strategic challenges likely to confront the United States in the twenty-first century. Recognizing that a new global partnership would require engaging New Delhi not only on issues important to the United States, the administration has moved rapidly to expand bilateral collaboration on a wide range of subjects, including those of greatest importance to India. The proposal pertaining to extending civilian atomic energy cooperation to India is, thus, part of a larger set of Presidential initiatives involving agriculture, cybersecurity, education, energy, health, science and technology, space, dual-use high technology, advanced military equipment, and trade.

Irrespective of the issues involved in each of these realms, the President has approached them through an entirely new prism, viewing India, in contrast to the past, as part of the solution rather than as part of the problem. He has judged the growth of Indian power to be beneficial to America and its geopolitical interests in Asia and, hence, worthy of strong support. And, he is convinced that the success of Indian democracy, the common interests shared with the United States, and the human ties that bind our two societies together, offer a sufficiently lasting assurance of New Delhi's responsible behavior so as to justify the burdens of requesting Congress to amend the relevant U.S. laws (and the international community, the relevant regimes) pertaining to peaceful nuclear trade. On all these matters, I believe—without any qualification—that the President has made the right judgment with respect to India and its importance to the United States. I hope that Congress will agree.

Thank you, Mr. Chairman, for your attention and consideration.

The CHAIRMAN. Well, thank you very much, Dr. Tellis. As I mentioned at the beginning of the hearing, we will try to have a 5-minute round so that we respect the rights of all Senators to ask questions. Likewise, we will have another panel, another round of questions, and two votes at 12 o'clock.

So, I will start the questioning, and start the 5 minutes, by indicating that I would observe, as you have, that, for 32 years, the United States, in one form or other, has expressed disapproval of India's nuclear weapons program—with a sense of shock and outrage, to begin with, followed by a number of sanctions. These, like-

wise, were levied on Pakistan after it commenced a nuclear program, and remained in place for quite a long while.

Many Senators around the table today were a part of a meeting with Secretary Powell shortly after 9/11/2001, in which we were summoned to S–407. Secretary Powell said, "You must lift all the sanctions on India and Pakistan immediately." And there were many authors of all sorts of sanctions over the years, people thinking of other ways that somehow we might make our point, and they said, "All of them?" And he said, "Yes." And he said, "Furthermore, forever, permanently, not just for a year or a trial situation. This is a new world. It's a new relationship. We all have to get used to that fact." Now, that was quite a cold drink of water for many people, but, nevertheless, it happened, and we proceeded into a different relationship.

In the case of India, I'm one who applauds the fact that the relationship has moved very, very steadily, in a commercial sense, in an intellectual sense, as we talk about the students coming and going. Tom Friedman's book, "The World is Flat," about his experiences, illustrates a very, very important aspect of it. But, at the same time, we also have been working our way through the problems of AQ Khan and testimony with regard to Libya, North Korea, Iran, elsewhere, where his minions, or he personally, have worked.

So, it's still a dangerous world. And, likewise, in the talks with the Chinese last week or previously, we really didn't get into winding up their program, or inspecting anybody in China. It's a given that whatever they have to do, they are planning to do.

The Indians recognize that, too, and they've made that point to us. They are two huge countries. It is all well and good to talk about a whole raft of countries around the world who might entertain nuclear situations. I remember going to Brazil in the mid-1980s, and the Defense Minister revealing to me that they were working on a program. Why he did so, I have no idea, except that he wanted to tell somebody, I suppose, about all of it. Now, they decided they didn't want to do that, after a while. Ditto for South Africa. I saw Qaddafi in Libya in September, and he explained why he didn't do it. But, nevertheless, he wants defense from us and the United Kingdom. If he's not going to have nuclear weapons, he wants conventional people to defend him. These are the realities. And I think you gentlemen have expressed that.

I've asked you, Dr. Carter, for more information. You indicate that whatever may be the aspirations of many of us for a dialog with India on energy—and this is an attractive aspect of this—nuclear power might satisfy a part of India's energy needs, to a greater extent. You've indicated you suspect that in the next 10–20 years or so, that this is not de minimis, but nevertheless, not a substantial change in the percentage of power, and that, with regard to oil, they'll still increase their demands for that, which is a very big problem. During my visit in Libya last summer, I saw a hotel filled with Indian and Chinese oilmen, pinning down every last acre in the place. Ditto for the rest of Africa. We need to take that seriously and have that dialog.

Why do you feel there will be so little substitution, given nuclear energy? Should our dialog really be more on clean-coal technology or other hybrid cars? How do we get into it with India on what I

believe is likely to be as crucial a problem as nuclear proliferation—namely, the potential conflicts over the energy resources of the world? Could you respond to that for a moment?

Dr. CARTER. Yes, Mr. Chairman, thank you. I think you captured it exactly right. Nuclear power is an important part of the Indian energy future. I don't mean to say that I would like to see it constrained in any way, but one can't exaggerate the extent to which it is going to spell a difference for India.

India's energy future will be determined by its strategies for both electricity generation and oil consumption. India's electricity generation is currently dominated by coal, but Indian coal is of poor quality and highly polluting. The idea of cooperating with India on clean coal is adumbrated somewhat in the Bush-Singh deal, and burning Indian coal more cleanly will do more than anything we are talking about here to address global warming, the Indian local environment and the Indian economy.

With respect to oil, what you said is also exactly right. This initiative won't have much effect on Indian oil consumption, which is a huge problem. Sadly, neither India nor the United States is likely to achieve substantial substitution between nuclear power and oil consumption in the near future. I am a big supporter of more nuclear power in the United States, as well, and I think it is unfortunate that we have not built any additional nuclear plants in the last couple of decades.

The CHAIRMAN. Well, I thank you for the answer and will look forward to more dialog on that subject. It just appears to me that the agreement—not the nuclear part, but other parts of the agreement—touch upon the energy issues. Hopefully, in our new relationship, that dialog will become more intense and constructive in both countries.

Dr. TELLIS. Mr. Chairman, could I add something to that?

The CHAIRMAN. Oh, yes.

Dr. TELLIS. I think Dr. Carter is right about the near-term consequences. The biggest difference that nuclear energy will make is between what the Indians call a "coal optimal" and a "coal maximal" regime. It does make the difference to whether the Indians go full steam in the direction of coal, versus some component of nuclear. But that is really a near-term problem.

Over the longer term, their biggest constraint with respect to nuclear energy has been that they have not had access to international nuclear cooperation. And so, all the goals, all the objectives that they have defined for themselves with respect to nuclear energy were premised on the assumption that they would have to develop this technology and build it indigenously.

If this agreement goes through, the rules of the game change. India gets access to foreign nuclear technology, which does change the quality of the energy mix that they seek.

The CHAIRMAN. I would advertise, again, Senate bill 1950, which staff reminds me was introduced last year, the India-United States Energy Security Act. And I really feel this is a tremendous thing to get into, but that would be another hearing, I suspect.

Senator Biden.

Senator BIDEN. Thank you very much.

Let me apologize to the last two witnesses for not being here for your testimony. I have a bill in the Judiciary Committee, and there is a group of witnesses who flew in from around the country, as well, and the hearing is taking place at the same time. That's the reason I absented myself.

Let me get right to my questions.

Is there any reason why, in your view—obviously, you cannot speak for India—but why India should not join the PSI and adhere to the guidelines of the Australia Group and the Wassenaar Agreement? Is there any reason, from their perspective, that you could see, why they should not sign onto those three agreements? Anyone.

Dr. TELLIS. I think there is no—there's no reason, in principle, Senator. And, in fact, we have been, in our conversations with India, urging them to adhere to both the Australia Group and the Wassenaar Agreement. There is a specific issue with respect to PSI, and it has to do with the Suppression of Unlawful Activities at Sea Act. The way the SUA Convention has been framed, it offers protections to legitimate nuclear weapons states and to nonnuclear weapons states under the terms of the NPT Treaty. By definition, India does not fall in either of those two categories. And so, at the moment, what they appear to be doing is conducting a legal review to see how they can, without prejudice to their national interests, get some kind of——

Senator BIDEN. How would their national interests be prejudiced, from their perspective?

Dr. TELLIS. I think their fear is that the SUA protects cargoes that come from nuclear weapons states and nonnuclear weapons states. It has nothing to say about cargoes involving countries that fall into this netherworld, which is India, Pakistan, and Israel. And so, they are working out, legally, some kind of formulation that would allow them to join PSI.

Senator BIDEN. Is there any reason, gentlemen, why Congress shouldn't insist that India sign onto these agreements before we move forward with this agreement? Anyone. That's a question any and all of you, or none of you, or anyone in the back of the room, or anybody who wants to speak up. [Laughter.]

Senator BIDEN. Ash.

Dr. CARTER. After India works through some of the legal issues, there is no reason why Delhi should not be able to sign on to any of these agreements. Your question is whether they should be required to do so, and that depends on what our intention is in requiring them to do so. I fully expect that, over time, they will join the PSI and adhere to the guidelines of the Australia Group and Wassenaar Agreement. The question is: Why, at this point, require them to do so?

This gets to the question of whether what I described as the imbalance in the deal—in which India got something very big in nuclear recognition, and we got a lot of things that are future and hypothetical, but also potentially quite big—can be rebalanced in some way. The measures you described do not go very far toward rebalancing the deal, as they are perfectly useful things to require of India in the long run.

If our intention in getting more from India on the nuclear front is to undo or mitigate the damage done by nuclear recognition, this cannot be achieved with any technical——

Senator BIDEN. Yeah.

Dr. CARTER [continuing]. Measure.

Senator BIDEN. The intention would be—and I'm not at all sure we should do it, but I'm investigating that—would be to demonstrate, less to us than to the rest of the world, that what we're really relying on here is Indian intentions. We're really taking, on faith, that India has no intention to break out, in any way, with regard to their nuclear capability, that they have peaceful intentions and require this recognition in order to be able to generate a civilian industry. And, second, what is really a rock-bottom distinction we make between India and other nations is that they're a democracy, they're acting in good faith, and that's why they are opted out, in a way, that we're not opting out anyone else who has previously gone down this road. That would be the rationale, if there was one.

And, Dean, you're shaking your head and nodding. You remind me of some of my staff. Why don't you just say what the hell you think, instead of nod. Okay? [Laughter.]

Ambassador GALLUCCI. Senator, thank you for recognizing me. [Laughter.]

Senator BIDEN. Thank you for seeking recognition by the grimace on your face. [Laughter.]

Ambassador GALLUCCI. Senator, I didn't leap to try to answer your question, because I oppose the approval of this deal, so the idea of, you know, working on how to improve it at the margins was not something that appealed to me. And, I agree with Ash, given the concerns that I have about this deal, they are not going to be met by that marginal improvement.

The grimace, which you correctly picked up on, was at the idea that we are trusting India to proceed with a civil program when, in fact, I think the deal is structured entirely to protect its opportunities to pursue a nuclear weapons program and expand it. We contribute to that as we provide uranium—there's a replacement principle here, there's more uranium available. Facilities that would be useful for the weapons program, the Indians explicitly exclude from safeguards.

So, I think what we're trusting here is that they're going to continue to be a nuclear weapons state, and we are going to be legitimizing that, at our great peril.

Senator BIDEN. I realize my time's up. We clearly are legitimizing that, and they're going to remain a nuclear weapons state. They're going to do that, no matter what. But the question—and I'm not asking a question, but the question raised from that, Mr. Chairman—is whether or not they are using this as an opportunity to be able to significantly expand their nuclear program, and, at the same time, their civilian program. Because you accurately point out there's a limitation on the amount of uranium available to them, and now they have to make a hard choice. They have to make a hard choice whether to reserve that for their weapons program or their civilian program. But there's not enough for their ci-

vilian program anyway, as I'm told. And so, it does get down a basis of trust, but—it seems to me. But I understand your point.

And I'm over my time, and I thank the Chair.

The CHAIRMAN. Thank you, Senator Biden.

Senator Hagel.

Senator HAGEL. Mr. Chairman, thank you.

Gentlemen, welcome. Thank you for your continued contributions to our country and this testimony, this morning, which is so very important.

I spent a week in India and Pakistan, over the last 2 weeks, during the Easter break, and had an opportunity to visit facilities and speak with the—both government and civilian leaders in both countries. And here's a question I'd like to put to each of you. In light of the testimony we've heard this morning, what my colleagues have noted, one of the references that Chairman Lugar made to Secretary Powell's comments after September 11, 2001—and I was one of those in that room that day that Secretary Powell noted that we should drop sanctions on Pakistan, India—not just for the year, but for a long time, but—always—because we have now entered a new age. It's just incidental, I suspect, that it's a new century. But the fact is, we have entered a new age. And I'd like to get your sense of—in light of all that we have heard this morning, your years of experience and expertise in nonproliferation, defense, diplomacy, economics, all that are woven into this same fabric of a nation's interest, of a world's interest—should we be reframing, should we be readjusting the entire framework of nonproliferation issues, including NPT, everything that has been the standard and the base and the foundation over the last 50 years?

When we look at the reality of the world that we live in and the continued reprocessing technology of uranium—who may have it, who probably will get it, who does have it—it's interesting to make policy, but unless that policy is relevant to the times and the challenges, it's nonsense. And I think we, too often in this town—I suspect, all nations' capitals—love to sit and listen and make policy, and especially listen to ourselves in these great echo chambers of wisdom—but we come up with completely irrelevant statements and issues when you try to connect those to the reality of what's actually going on in the world.

So, my question is: Should we be just reassessing, reframing the entire nuclear framework that we have really come to rely on over the last 50 years?

Secretary Perry.

Dr. PERRY. Thank you very much, Senator. I think that's a very important question, and I'd like to give you at least my version of that.

We have entered a new age, in my judgment, and in this new age, the spread of nuclear weapons is an even more important problem than it was before. And I would think our policies ought to be designed to increase the actions we take to prevent the spread of nuclear weapons. In that sense, I am completely in accord with the point that Dr. Gallucci made in his testimony about the importance of this.

The issue, in my mind, relative to this agreement, is: Does the agreement help us in that cause or deter us in that cause? In my judgment, the success in preventing the spread of nuclear weapons absolutely requires the cooperation of other major nations in the world; in particular, all of the nuclear powers of the world. India is a nuclear power. And I think we have a better chance of getting that cooperation if we work with them as strategic partners, than not. And it's for that reason alone that I support this agreement—reluctantly, but still support it.

Senator HAGEL. Thank you.

Secretary Carter.

Dr. CARTER. I agree with what Dr. Perry just said. Your question also raises the issue of whether there are fundamental problems with the NPT regime. I'd say two things in response to that.

The first is that the NPT is only one arrow in our quiver in protecting ourselves from nuclear weapons. The NPT is an important tool, but we should never think that the NPT alone is going to save us. The rogues pay no attention. They don't join, or they join and cheat. In this way, the effectiveness of the NPT is somewhat limited.

The treaty's principal value is with respect to those who are not at all rogues, but might be tempted to develop a nuclear capability. As Bob Gallucci has indicated, the NPT has been an effective barrier to further proliferations, but it is not the only tool at our disposal.

There is a tendency to say, "Since the NPT doesn't do everything, maybe we ought to tear it up and throw it out." This approach underestimates the value of the treaty.

There is one aspect of the NPT that I think we need to address going forward, and this is probably implied in what Dr. Perry said. In essence, the NPT allows states to develop nuclear power, but not the bomb. We all know that the boundary between a nuclear power program and a bomb program is not an impermeable one. Over time, we are going to have to try to expand the norm of the NPT to include not just nuclear weapons programs, but enrichment and reprocessing, as well. That is the next frontier for the NPT. You see it at work with respect to the Iranian program. You see it at work with respect to the Brazilian program. Just as we can't have a world where the bomb is in 80 or 90 countries, we really can't have a world in which enrichment and reprocessing is in 80 or 90 countries either. As additional states acquire enrichment and reprocessing capabilities, there is an increased risk that these programs will be abused or that these materials will fall into the wrong hands.

The solution is not to tear up and abandon the NPT because it fails to do everything. Instead, we must expand the treaty to cover fissile materials as well as bombs.

Senator HAGEL. Thank you.

Dr. Gallucci.

Ambassador GALLUCCI. Senator, I think, for a long time, the issue of proliferation was a matter of states, nation-states. And the NPT is aimed at nation-states. And we have been remarkably successful in limiting the number of countries that have acquired nuclear weapons, compared to the countries that could, if they wished. And that's one of the reasons, and the principal reason,

why I worry about this particular proposal, because I think it'll do damage to our efforts to limit the number of countries that have nuclear weapons.

What's new—because you asked the question about whether we should be reconsidering all this—what's new is not the threat that would come from widespread proliferation to nation-states, but the additional threat over the last 10 years or so that we have now come to recognize, the quintessential threat, the ultimate threat of a real nondeterrable actor, al-Qaeda, with nuclear weapons. What do we do about that? And that goes to what Ash was talking about, a world in which plutonium moves around as a fuel, enrichment facilities are everywhere, and a switch can be turned to produce fissile material. That's a world we don't want to live in. That's a world in which the access to this material is going to get easier and easier over time. And that's a very dangerous one.

It's related, here, because the Indian energy program does envision a breeder reactor fuel of cycle thorium-uranium-233. And I think it makes no more sense than anybody else's breeder fuel cycle, but it's out there; and it involves reprocessing and fissile material, as well as enrichment. That's an added concern I have about this arrangement, that it will involve fissile material in nuclear power production. It is not my principal concern, which is legitimizing India as a nuclear weapons state.

India is, as Dr. Perry said, a nuclear power. And knowing that is certainly something that we should admit, and there's no question about that. But I think there is something terribly important about saying, at this point, we are going to proceed and accept its status as legitimate, because, as Ash Carter said, that really does suggest that eventually all will be forgiven. And I think the norm—I don't want to put it on the treaty—the norm against additional states acquiring nuclear weapons is that important. We don't want to leave a world where we can count on the fingers of two hands, how many states we have with nuclear weapons. If it gets more complicated than that, it'll get more dangerous than that.

Senator HAGEL. Thank you.

Dr. Tellis.

Dr. TELLIS. The question you asked, Senator, is a very difficult one to answer. And I think Sir Karl Popper used to have a phrase, which he used often, called "piecemeal social engineering." And I think our approach to dealing with what are the infirmities in the system ought to adopt that approach. I think the NPT has served us well. It's one of many instruments that we have. But there are three issues, in my judgment, that need resolution. One is the whole status of the fuel cycle and the rights that countries have to the fuel cycle, which can be used for both benign and malign purposes. The second is the status of the outliers and what that means for the future durability of the regime. And I support this agreement, because it's an effort to at least bring one of the three, and perhaps the most important outlier, into the regime. And the third is the whole question of the security of nuclear materials and nuclear weapons, which is not addressed directly by the NPT, but is part of the system.

I think our efforts ought to be in each of these three areas. And if we proceed with gradualism, piecemeal social engineering, we

come out ahead, rather than any bold attempts to redesign the system from scratch.

Senator HAGEL. Thank you.

The CHAIRMAN. Thank you, Senator Hagel.

Senator Boxer.

Senator BOXER. Thank you so much. And I want to apologize in advance. I have to be somewhere in—5 minutes ago. So, I—but I stayed, because this is so important.

Mr. Chairman, I wanted to compliment you and Senator Biden. This panel is so terrific. And they really represent, I think, all of the views that we have in the Senate, some people who outright don't like this, some people who outright love this, and those in between. So, it's been very helpful to me.

I want to ask a question about Iran, because I think that's, kind of, the unspoken—one of the unspoken issues. The other is China. So, I have two questions, and I'll make them fast.

There are those who believe that timing is everything. And surely all of us would agree, timing is something. And this isn't coming to us in a vacuum. There are other things going on in the world. And I think it's fair to say that, whether you're a Republican, a Democrat, an Independent, and wherever you live, you're worried about Iran's nuclear capabilities in the future. So, now here's—this comes to us at this particular time.

One of the members of the second panel, Gary Milhollin, testified before the House. And this is what he said, and I want to get your response—and I'll start with Dr. Gallucci—"If stopping Iran is our first priority, we should shelve the India deal, at least until the Iranian nuclear crisis is over. Iranian officials are citing the deal almost every day to argue that the United States cares less about proliferation than about using proliferation rules to support its friends and punish its adversaries. Shelving the deal would prove that this is not true."

Do you agree with that statement, Dr. Gallucci?

Ambassador GALLUCCI. I think there is some truth in it, but I would be concerned that if you embraced it entirely, you would be caught on the proposition that we're going to hold our strategic relationship with India hostage to a timing issue with Iran. And it is perhaps true that Dr. Milhollin is thinking we're not going to solve the Iran problem anytime soon, so it can hang on that hook for a long time. But I think, in other words, Senator, that we are rhetorically handicapped, as he suggests, as we go to various fora—U.N. Security Council, for example—to argue that Iran poses an extraordinary threat to regional and international security by its program, which, we are asserting, is aimed at nuclear weapons acquisition, and they deny, while, at the same time, adopting a different policy with India. But, as I said in my prepared remarks, I don't like the comparison, because I, myself, can see India as a more responsible player in the international arena than Iran.

Senator BOXER. So, what you're basically saying is, it's a little bit of a—it's constraining us in our rhetoric at a time when we should not be so constrained. But you don't think that, as a premise, it's—we shouldn't base our decision on this. Is that basically what you're saying?

Ambassador GALLUCCI. I'd accept that summary, Senator.

Senator BOXER. OK. Anybody—do most people agree with that? [Witnesses all nodded heads.]

OK. Then let me move on, because, Dr. Tellis, something confused me. I read that you wrote to the administration, "If the United States is serious about advancing its geopolitical objectives in Asia, it will most—it would almost, by definition, help New Delhi develop strategic capabilities such that India's nuclear weaponry and associated delivery systems could deter against the growing and utterly more capable nuclear forces Beijing is likely to possess by 2025." And this—according to the Washington Post, you wrote this to Condoleezza Rice and her folks over at State in arguing for this.

And I've always believed that's, kind of, the silent, but moving, force behind this. But then, today, in your statement, you said, "A policy of containing China is neither feasible nor necessary for the United States. And it is not at all obvious that India has any interest in becoming part of a coalition aimed at containing China." So, which is your view?

Dr. TELLIS. Both. Except that they were said in different contexts. The first was in a publication, when I was discussing, abstractly, the future of the balance of power in Asia. The second is really what the policy consequences are. I have never advocated that we support the Indian nuclear program as a way of deterring the Chinese. The Indians will buy their own insurance, make their own investments in that regard.

The only thing I have said is that any agreement that requires India to constrain its nuclear weapons program is obviously not going to be acceptable to the Indians. And I believe, personally, it shouldn't—it will also not be in our interest.

Senator BOXER. Thank you, Doctor. I just don't see how you can make both those statements. But we don't have time.

Thank you.

The CHAIRMAN. Thank you very much, Senator Boxer.

Senator Chafee.

Senator CHAFEE. Thank you, Mr. Chairman. Thank you, gentlemen, for your testimony.

Dean Gallucci, you said in your testimony, "If we do this deal, ask how we will avoid offering a similar one to Brazil or Argentina if they decide on nuclear weapons acquisition, or our treaty ally South Korea." Would you expand on what might occur in that scenario?

Ambassador GALLUCCI. That was a shorthand version of what Ash Carter was arguing to you, I think, unless he denies it. But I do believe that we're both looking at the same phenomenon. We're looking not at the rogue states as the issue here. I didn't mention North Korea. I brought up Iran in, kind of, a favorable context for India. But the issue here is, when you have a state that has the capability to move from a peaceful nuclear program to a nuclear weapons program, a state with a record of—good behavior—in other words, it looks like a state of the kind India is right now, and that good behavior is used as a justification for abandoning the policy that we've had for decades. I ask here this question: If we abandon the policy of no nuclear cooperation with states that have nuclear weapons programs and are not the original five members of

the Non-Proliferation Treaty, then what's to stop other states, like Argentina, Brazil, and South Korea? And I picked those for the same reason Ash did, because they had nuclear weapons programs at one point, and they have capable civilian programs now. If there's no penalty here, they could go through a calculation—maybe not the current regime or the next one, but the one after that. And suppose there's no norm in place about not acquiring nuclear weapons, and the norm is, no more nuclear weapons states. Well, "more," after what? Well, after the original five. That's the norm. Right? And if you violate it, in this case, and say, "Well, we're doing it, because India is really good," well, we've got other "really good" states, and, before you know it, you'll have a lot of "really good" states with nuclear weapons, I fear. And the world is—while not a safe place, it's safer for the very few numbers of weapons states that we have, in my view.

Senator CHAFEE. Thank you very much.

And, Secretary Perry—Carter—excuse me—you said that India has no AQ Khans—there are no AQ Khans in India. Yet, in 2004 and 2005, the United States sanctioned Indian scientists and chemical companies for transferring Iran—to Iran, WMD-related equipment and technology. How confident are you that there are no AQ Khans?

Dr. CARTER. That's a very good question. I cannot be certain, but I am unaware of any evidence that there have been Indian AQ Khans; that is, networks illicitly transferring the wherewithal of nuclear weapons of mass destruction. I believe it is accurate to say, and is in the public record, that Indian firms have been caught making transfers of technology related to ballistic missiles and possibly chemical weapons, as well. Although their transgressions are less severe than those committed by AQ Khan, the United States should make clear its expectations that these illicit transfers will stop.

This brings me to a more general point. India has gotten something huge in its admission to the nuclear club. The United States must make clear that membership has responsibilities, as well as privileges. We ought to look very carefully at India's discharging of its responsibilities as a member of the club. Particular emphasis should be placed on the need for Indian cooperation in stopping illicit transfers and any AQ Khan-like activity, and providing support for the United States position on Iran. The United States should clarify the expectation that India will change its policy on the Iranian nuclear issue. We changed our policy about India, and now we need them to change their policy about nuclear security in the world, and it starts with Iran.

Senator CHAFEE. Well, thank you.

And maybe you've answered this already, but I'll ask. Dr. Perry, Dean Gallucci says that we should agree to this deal if India accepts a reasonably verifiable ban on the production of any more fissile material for nuclear weapons purposes. Why not make that part of the agreement?

Dr. PERRY. I'm very much in favor of India accepting that ban. A judgment call is that I would not make it part—a requirement for the agreement, because I think that would be a poison pill that would kill the agreement. I do think we should take on, as a vig-

orous diplomatic measure following the agreement, working with Iran to try to get—working with India to try to get such agreement.

Senator CHAFEE. All right. Thank you.

The CHAIRMAN. Thank you very much, Senator Chafee.

Senator Obama.

Senator OBAMA. Thank you very much, Mr. Chairman. Thank you, to the panelists. This has been extremely useful. I apologize that I missed some of the earlier presentations.

I've said before, when Secretary Rice was here, that it strikes me that the geopolitics of this deal may make sense. In fact, I think they do. I think there are all sorts of reasons why we would want to strengthen our alliance with India. It strikes me that the details are not entirely where we want them. And, Secretary Perry, it sounded like that's your assessment of the agreement; Secretary Carter, it appears that is your assessment, as well. I just wanted to go over, again, what role you see the Senate playing, at this point, or—is it your judgment that we essentially have to hold our nose and vote up or down on this, or do you think that there are still modifications or improvements that can be made? And I address this to those who think that conceptually this makes sense.

I'll have a separate question for you, Mr. Gallucci.

Any of you.

Dr. CARTER. Senator, I'll start off.

I am in favor of the Senate expressing very clearly what the United States expects from this arrangement.

Senator OBAMA. Can you iterate those——

Dr. CARTER. Yes; absolutely. One I just named, which is help on Iran. There are a host of other ways in which India can be an activist and a leader in nonproliferation. India has historically been a detractor of the nonproliferation regime, and we should expect that they will do a 180 in their policy. We did a 180 in our policy toward India, and we should expect them to do the same.

Preferential access for United States suppliers of nuclear and military materiel to India is likewise a fair part of the transaction. I can make a list—and my statement includes one—of the expectations that the United States should have. We have given India a big quid in the nuclear front; we are now looking for geopolitical quos, as you aptly put it. I think these objectives should be spelled out quite clearly as the expectations of this country over time.

Unfortunately, although India received its big payoff up front, it will be some time before we know if our objectives have been fulfilled. This is one of the ways in which, as I said, the deal was unbalanced. They get what we give them now, and we get what they give us—maybe—later.

Senator OBAMA. Anyone else? Secretary Perry, you want to comment on that?

Ambassador GALLUCCI. Senator, I appreciate you wanting to give me a pass on this, since I would have the Senate simply vote it down. But I guess I would say, as several people have pointed out, that there are apparently a number of ways you can go in the Senate, and the thought here is that, if you do proceed, that you wait to vote this up until you actually see the language of section 123, and you see what happens in the Nuclear Suppliers Group.

Senator OBAMA. Go ahead.

Dr. PERRY. Senator Obama, I think the—as you said, the geopolitics rationale is not only a good reason, it's a powerful reason to go ahead with the agreement. I have expressed the concerns that Dr. Gallucci concerned about the weakness on nonproliferation aspects. It's my judgment—and it's different from Dr. Gallucci's judgment—on this point, though, it's my judgment that putting amendments on the agreement, requiring amendments for it, would not substantially fix that problem, but it would probably kill the agreement, and it would cause us to lose the geopolitical. For that reason, therefore, I do not favor crippling amendments.

Senator OBAMA. OK.

Doctor.

Dr. TELLIS. I'm very sympathetic to what Ash Carter said, but I feel uncomfortable with trying to secure those gains through legislative vehicles, because I think there is a way in which we can secure those objectives through a continuing conversation with India. They understand how the world works.

Senator OBAMA. Right.

Dr. TELLIS. They understand what is it they need to do to keep United States engagement continuing. I think if you put it in legislation, what you end up doing is that you box them in, and then issues of national pride——

Senator OBAMA. Right.

Dr. TELLIS [continuing]. Begin to cut in the way of rational choices.

Senator OBAMA. Right.

Mr. Chairman, if I could have the indulgence, I—I want to pick up on the question that Senator Hagel had asked. I mean, it strikes me that the nonproliferation regime has worked modestly well over the last number of years. I think, Secretary Carter, you put it well, those folks who are basically good actors on the international stage, they have to make a calculation: Is it worth weaponizing or not? There are enough carrots and enough sticks for them to make that decision not to go. If it's North Korea, they're going to make a different calculation. But they would have probably made that calculation anyway. So, net, this regime has been a plus.

There is a concern, though, that—I think the norms that Dr. Gallucci talks about in his opening statement are being eroded, to some degree, by this. And as I understood Senator Hagel's question, it is: How do we prevent the exceptions from overwhelming the rule? How do we prevent a situation in which you start off with North Korea and Iran, and then India's thinking differently, and, after a while, what has been a useful regime starts fraying at the edges, to the point where it doesn't serve any useful function?

So, I'm wondering—it may be that this particular agreement makes sense geopolitically, and we pursue it, but I'm wondering, for those who are supportive of the India agreement, what prevents further erosion of the nonproliferation regime over time?

And, Dr. Gallucci, I assume that that's why you oppose the deal. But I haven't heard, sort of, a direct answer to: Are there modifications or ways of shoring up, or making, sort of, the reality match up with the norms that are out there? In other words, what

changes to the nonproliferation regime should we be thinking about to make it more effective?

One of the things in law, generally, is that if people are disregarding laws too often at a certain point it ends up almost being more damaging, it creates a disrespect for norms, generally, as opposed to that particular norm. So—please.

Dr. CARTER. May I, Senator? I think that is really the heart of the matter here, and that is whether the compromise of principle, which we unquestionably did in recognizing India, is a torpedo amidships to the norm as a whole. I believe that when you compromise one principle for another objective—in this case, strategic partnership with India—it matters a great deal how, to what extent, and why you compromised the principle.

With respect to its damage to the NPT regime, the India deal cannot be considered a torpedo amidships. The deal reflects the United States position that India's nonproliferation behavior has been good, yet this clearly does not apply to Pakistan. Given AQ Khan, I would be exactly where Bob Gallucci is on this issue if anybody was even talking about striking a similar deal with Pakistan.

The second difference between India and Pakistan is that India is a democracy that is apparently politically stable; Pakistan is not. India has made representations, which remain to be borne out, in fact, that it will truly turn from being a detractor of the nonproliferation regime to being a supporter. Dr. Perry has made the point that there are many ways that India can demonstrate its commitment to nonproliferation, and India has said it will oblige.

India is hardly a rogue state. It is hardly an unstable state. It is hardly a state that has bad behavior, or, as near as we can tell, bad intentions. And, therefore, I would judge it's OK to compromise principle.

Moreover, the view which I just expressed, appears to be shared by most of the other adherents to the NPT regime. I'd cite Mohamed ElBaradei, the IAEA director and Nobel laureate, who essentially came to the same judgment. I do not like to compromise principle, but, in the case of India, that is about the best case I can imagine.

Ambassador GALLUCCI. Senator, you asked, specifically, what you could do to help the regime as you went ahead and did this for, as you said, geopolitical reasons. The proposition I've put forth is that you require that India produce no more material for nuclear weapons. If you went ahead and made that a provision of this deal, you would still be abandoning this principle. But you would have such a good case for having capped a nuclear weapons program, you could say that this was not going to do such damage to the regime.

I disagree with Ash. I do think this is—"a torpedo amidships" is the metaphor. I yield to no one in their enthusiasm for a reinvigorated strategic relationship with India. I do disagree that, for all time, United States-Indian relations will be limited and damaged by this. I think real damage will be done. I don't think what I'm proposing could be negotiated right now. I do believe the negotiators did the best they could with what they had to work with. But I do not think we are simply eroding the Non-Proliferation Treaty regime now. We are trashing it, in my view. When you use the phrase "geopolitical," it has a certain gravitas to it. And some-

times nonproliferation sounds a little ephemeral, and I want to give that a little gravitas, too. We are talking about a change in the character of the international system that would come about if this regime is trashed as a result of this, over time.

Senator OBAMA. Although I—well, let me—I don't want to take up any more time.

Dr. Tellis.

Dr. TELLIS. I think the only solution to the problem that you raise is a consensus among the international community that India is the exception, and will be treated as such. There would be real risks—and the risks that you highlight are certainly, you know, critical—but there would be real risks if the United States could both initiate and implement this agreement unilaterally, because then that would open the door for exactly the kind of fracturing that we all fear. On the other hand, if there is a process of consensus-building which is really what the whole exercise in the NSG is about, then what we could do is create a new norm, and the new norm is that India meets certain criteria, not simply in the vision of the United States, but the international community, more generally, and that becomes the bulwark that prevents the kind of fracturing that you refer to.

Senator OBAMA. That's interesting.

Thank you.

The CHAIRMAN. Thank you very much, Senator Obama.

Senator Voinovich.

Senator VOINOVICH. Thank you, Mr. Chairman.

I'm concerned about Mr. Gallucci's concern about this agreement. Mr. Gallucci, do you think the agreement is going to torpedo efforts aimed at limiting the proliferation of nuclear weapons.

About a month ago I was in Vienna, where I met with the International Atomic Energy Agency. The thing that impressed me was—and perhaps this is the reason the IAEA has come out in support of the India agreement—is that the IAEA has had an ongoing relationship with India. They have communicated back and forth on a lot of matters over the years, to the extent that the IAEA has had more communication with India than they have with some of the other countries that signed the NPT Treaty. They believe that by entering into this agreement, we will be moving the ball further down the field, making things better, rather than making them worse. How do you respond to that?

Ambassador GALLUCCI. Senator, I'm going to be making some deductions here, because I actually haven't talked to Mr. ElBaradei or anybody from the Agency, so I can't really, based on experience, talk about motivation.

But I think certainly that when the United States of America and India, two—one superpower and one very important power—propose to settle a nuclear issue, there is great incentive for the Agency to find a way to make this acceptable to them. So, in basic political terms—I don't mean to impugn their motivation—they may come to a different calculation. I'm sitting here with colleagues for whom I have the greatest respect, and we have come to different judgments. I don't think that I value the norm or the national security objective of preventing the spread of nuclear weapons any more than my colleagues at this table. All right? But we

come to different conclusions here as you balance the regional objective against the global objective. And I think it's fair to do that. I do see it of greater damage here, and I do—to the nonproliferation objectives—than my colleagues. And I don't see as catastrophic an impact on United States-India relations, at least not as durable a one. I think, for a time, because of what the administration has done, there would be that negative impact. And I don't believe, as—I agree with them—that if you tinker at the margins with this deal, you may end up with the worst of all worlds, no deal and bad relations with India. So, I accept that. And I'm a realist about the damage this would do to United States-Indian relations, but I don't think it would be durable or catastrophic.

The important things that India will do with the United States of America, it will do, not because we ship it uranium, but it will do because it's in India's interest. And whether we do this deal or not, over the long term, the real substance of United States-Indian relations will turn on the mutuality of interests of our two countries. So, I don't really buy that we have to do this, or it's all over for us in South Asia. I think that's an overstatement.

I don't think it's an overstatement to say that we've had a very clear and consistent policy for decades, and we have a world that is defined in these terms by a very few number of nuclear weapons states. And I am very worried about tampering with that.

Senator VOINOVICH. My other question involves the issue of whether this deal would send a signal to other nations who might want to have nuclear capacity. Do you think that this is going to set a precedent to cause those countries to say, "We're good people. We have democracies. And, therefore, we ought to be able to do what India has done and acquire a nuclear capacity"? Do you think that's going to happen?

Ambassador GALLUCCI. No, Senator. I——

Senator VOINOVICH. I mean to ask any of the witnesses.

Ambassador GALLUCCI. Well, I'll—since I started, just let me say, briefly, no, I don't think that the next thing that will happen if—if this deal is approved on a Monday, I don't think, on Tuesday morning, in capitals around the world, they will all now reconsider their positions. I think, as calculations are made by either current governments or future governments, it will be important for these countries to know that it is no longer a matter of clear practice for the United States and the Nuclear Suppliers Group and the international community to consider there being only five legitimate nuclear weapons states, that now you can have six. And there's no reason, if good behavior is, in fact, the rationale, why you can't have 7 and 8—9 and 10.

Senator VOINOVICH. Well, the other one was, out of the tent, and they had it, and the others haven't started to develop a nuclear capacity. You had a problem out there, and you had somebody outside. Now we're trying to bring them into it. And I guess I'd argue that's a good thing to do.

The last point is the relationship of this agreement to China. I was at an Aspen Institute 3-day session, and there was concern among the Chinese about this agreement. The Chinese were asking, "Where are we—what are we doing, in terms of India"? My feeling is that we've been long overdue, in terms of bettering our

relationship with India. We're moving down that track, with this agreement. And that's good. But do you think that our agreement will change China's attitude toward nuclear proliferation? Is China going to be doing something a year from now that they wouldn't have done if we didn't enter into this agreement with India?

Mr. Perry.

Dr. PERRY. I think what would cause China to alter their view on what they're doing in the nuclear program would be not this agreement, but actions that India might take. If India actually proceeded with a significant buildup of their nuclear capability, then that would alter China's view. I do not expect that to happen. And I do not think this agreement would facilitate it happening. That could have happened in the absence of the agreement. So, I do not think the agreement itself is going to have that effect.

Senator VOINOVICH. Mr. Carter.

Dr. CARTER. Senator, there is one geopolitical reason for the United States to foster better relations with India, and it does have to do with China. This is very difficult for both the administration and the Indians to talk about, but the fact of the matter is, we don't know where destiny is going to take China. I am not a pessimist about that, but we do not know whether China will be a responsible stakeholder, as Bob Zoellick would say, or whether a new generation of Chinese leaders, Chinese nationalism, a dustup with us over Taiwan, or something else will create the outcome for our relations with China that neither side wants, which is one of contention.

Should future conflict with China occur, there is no question that we would benefit from having India as another counterweight to China in Asia. That's not a benefit of the deal that I ever wish to harvest, but it is a consideration.

Dr. TELLIS. I think all three countries—the United States, India, and China—are involved in a delicate hedging game at the moment, and they are hedging precisely because of the reason that Ash alluded to. We don't know what the future holds.

One of the ironies of this relationship is that it might actually lead to Sino-Indian rapprochement—not complete rapprochement, but, at least, a closening of Sino-Indian ties—because one of the things that the Chinese are concerned about in this relationship is that it might pull India even more permanently and durably into the orbit of American friendship. And so, you can see this in a whole range of issue areas in the bilateral Sino-Indian relationship, where China has actually watched India's gradual closening to the United States with a certain degree of alarm, but also as a sense of opportunity for them to change course with respect to their own bilateral relations with New Delhi.

Senator VOINOVICH. Thank you.

The CHAIRMAN. Thank you very much, Senator Voinovich.

Senator Allen.

Senator ALLEN. Thank you, Mr. Chairman. And thank all of our witnesses for your insights.

I'd like to take a wider view of all of this. And I will say, at the outset, Dr. Tellis, I appreciate your very frank answer to Senator Voinovich's question, which is true. And I associate myself with your insights on this, just so you all know where I'm coming from.

The issue on energy—talking about how this matters and what amount it will be, nuclear versus clean-coal technology and so forth. Having been in India just last Thanksgiving, and meeting with the India Institutes of Technology folks, the economic developers in Karnataka and Bangalore, as well as Prime Minister Singh, it is clear how important this was to them. India is an even more energy-dependent country than we are. Right now we're paying these high gasoline prices. Some of it, obviously, is because of the world demand for oil and growing economies in Central Europe, India, and China. And even if production of oil in the world increases, the demand is also increasing. And so, there are a lot of things we need to do. We need to be more efficient, use the advancements in nanotechnology for lighter, stronger materials, maybe lithium-ion batteries, solar photovoltaics. We need the diversity of fuels. Not any one fuel will power our economy.

Another area of cooperation with India will be, I believe, in biofuels. Their rural areas are impoverished. The rural areas, and it's amazing to me how many large areas of that country—a prospering, growing country, but with heartbreaking poverty—how many areas have no electricity at all. And nuclear's going to be part of it. Clean-coal technology needs to be part of it; and nuclear, as well.

I actually think, long term for the world, there's going to be more and more countries that are going to want to use civilian nuclear power. I think we actually ought to learn a few things from others, whether it's chemical separation or reprocessing, which is a much less dangerous, more efficient way of handling it, or maybe concepts such as thorium added to the uranium in the beginning, so that it cannot be made into a weapons-grade uranium. This is going to be a challenge, I think, around the world. Brazil, of course, has biofuels, but there's going to be other countries that are going to want to go to nuclear.

The point of the matter, though, is that India needs nuclear power. Even their natural gas, they ship it in, mostly liquified natural gas—an option, but not as good as a pipeline of natural gas. So, this is going to be necessary for them.

Let's recognize that India, the world's largest democracy, share the same values. It is a country of diversity. There is religious tolerance. There's freedom of religion. Large groups of different religions, and they're not at each other's necks. We share, it appears to me, the same goals for Asia, which is peace. And so, I think this is an important strategic partnership of countries that have basically the same sort of postulates, or pillars of a free and just society. And so, that's the wider picture that you mentioned, Mr. Carter.

Now, the question is: How are we going to deal with Iran or other countries? I think it's very easy to distinguish India and Iran, to be honest with you, Dean, and that is, no one considers India a state sponsor of terror. The world recognizes Iran as a state sponsor of terror. While India and Pakistan have not had the greatest relations, they haven't said, "We're going to wipe Pakistan off the map," as Iran has to Israel.

The proliferation into Iran on arms, some from India, but not nuclear. The Russians are making money off of this deal, and the Chi-

nese. So, I think it's pretty easy, if you want to look at someone's past record of performance compared to other countries that may want nuclear weapons, India has an outstanding record. And that's how I would, personally, easily distinguish it.

The question here is, with all these advantages—economically, diplomatically, a strategic partner—and India's just a model, I think, for other countries, in many respects—and while this may not be a perfect deal, and India may have gotten, in some aspects of it, the better of it; in other parts, we might have gotten the better—you know, that's where we are. And I'm glad to hear you all say, "Well, gosh, to start tinkering and fouling it all up will be even more disastrous, and it wouldn't happen." But wouldn't you also say it's actually positive, in that India has been now brought into the global nuclear mainstream? It's clearly increasing the transparency of what they're doing. There is now oversight of, at least, their civilian nuclear capabilities. And, in fact, the aspect of this being permanent, isn't that a positive that we didn't have before, even if there might have been some tweaking and more concessions we might could have obtained from it?

So, would you not think that having India under the International Atomic Energy Agency safeguards a positive? I'll ask you, Mr. Carter, since you take the widest view, in your own words.

Dr. CARTER. I think it is positive, but I think it remains to be seen whether the big benefits from India on the nuclear front will be realized. I do not think they come so much from India submitting certain facilities to the IAEA, although these are important steps. The key is whether India really does constrain its own behavior, not because we constrain it technically, but because it realizes that it is not a good thing for it to build more and cause others to build more. We'll see whether India puts its shoulder to the wheel with us against Iran. We'll see whether India stops talking about the NPT as an unfair thing, and starts talking about it as an indispensable thing.

I hope all that occurs. I would be opposing this deal if I thought that that wasn't going to occur, that India was lying to us, or that India was not inclined to meet our expectations. But the fact of the matter is, it remains to be seen.

Senator ALLEN. Yes. Dean Gallucci.

Dr. CARTER. If I may also—I apologize, Mr. Chairman and Senator Allen—excuse myself. I have to depart.

The CHAIRMAN. We understand. And we thank you very much for your testimony.

Dr. CARTER. Thank you. I've enjoyed being here, and appreciate the honor of being here.

Senator ALLEN. Great having you.

Ambassador GALLUCCI. Senator, I just briefly wanted to say that everything you said at the front part of your statement, I think is exactly right, about the importance of India. And I do not dissent from any of that.

But I really was enthusiastic about coming here today, because I really think it's important that we not have an image here of accomplishing something we're not accomplishing. We are not bringing India into the regime. We're not bringing India into the tent. We are building a new tent. We're not trading them into the ar-

rangement, which I think has worked so well; we're changing that arrangement. And I just beg you all, as you do this—and you may decide to do this—and my colleagues here next to me think it's worth doing because of how important India is. OK, I think that's a mistake, but at least I think we should be clear, this is not drawing India into the safeguards regime.

For me, I take a dimmer view, even than my colleague Ash does, of having India submit some reactors for safeguards. To me, that is a distraction. Those inspectors should go someplace else. Maybe Iran, for example. Because I agree entirely, that's a problem. I don't want to see the inspectors doing that, particularly not when they have the other facilities in India producing plutonium for nuclear weapons. It's not a demonstration of their willingness to modify or accept a compromise in their sovereignty, as other states do that accept full-scope safeguards. They're not doing that. So, I would encourage you——

Senator ALLEN. You don't think—go ahead.

Ambassador GALLUCCI. I'm sorry.

Senator ALLEN. Dean, do you not think that, insofar as their civilian nuclear, they will not be in compliance with international safeguards?

Ambassador GALLUCCI. No——

Senator ALLEN. I understand, on the military side. But on the civilian side?

Ambassador GALLUCCI. The problem, Senator, is that they had—before this—well, they have, now, some reactors—and I think probably about six or so—that were subject to international safeguards, because they were supplied by countries under agreements that required that safeguards be applied. And then they have other facilities that they built. Some of those facilities, they use for energy. Some are—and some are used for energy, and the plutonium that's derived is used to make weapons. What they are doing in this deal is increasing the number of reactors that would be subject to international safeguards. They pick the reactors, and they leave the other ones out, so they can continue building nuclear weapons.

I don't see this as a plus for the nonproliferation regime, adding these reactors. It is a gesture, but I think it's an empty one. I really do believe the international community, and everybody who understands anything about the way one builds nuclear weapons understands—that this really doesn't do anything, in terms of the regime, substantively. To me, it's an empty gesture. But, again, please, if you look at this deal and say that—and believe that this is so essential for our relationship with India, and you decide we must do it—all I'm saying is, please recognize the sacrifice you're making to the regime. I can't see this as a plus for the nonproliferation regime. I can see it as doing damage. And I'd, therefore, on balance, come out in a different position.

Thank you.

Senator ALLEN. Dr. Tellis.

Dr. TELLIS. I think the distinction is between bringing India into the treaty and bringing India into the regime. I do not think this agreement brings India into the treaty, but it certainly brings India into the regime. And it brings India into the regime not merely because it brings some reactors under safeguards, but because it now

takes on regime obligations primarily with respect to the diffusion of nuclear technology to third parties. That is the real benefit of this agreement.

I agree with Ambassador Gallucci. I mean, one can have a discussion about whether a few reactors here or there make a difference. My own view is that having more reactors is better for all concerned, compared to having less. But the real benefits, for me, are that India now takes on regime obligations with respect to export controls in ways that are verifiable, in ways that are durable, and which involve obligations that actually go beyond those taken by NPT signatories.

India—people forget that India, today, has tremendous technical competence in more than one fuel cycle. If there were no such agreement, the only obligation that would prevent India from diffusing this technology are the voluntary obligations that India takes, which are entirely reversible at a future point in time.

What this agreement does is that it binds India permanently, through a set of international agreements—not simply with the United States, but with the IAEA, with the NSG—into adopting a set of norms that not only advance India's interests—of course they do—but advance our own and the interests of the international community, especially the nonnuclear weapons states.

Senator ALLEN. Thank you.

The CHAIRMAN. Thank you very much.

Senator ALLEN. Thank you, Mr. Chairman. Thank you, gentlemen, unless—Mr. Perry, I—you don't need to say anything, unless you have something to add to it.

Dr. PERRY. I would have made the same point that Dr. Tellis did.

Senator ALLEN. Thank——

Dr. PERRY. I would have made the same point that Dr. Tellis already made.

Senator ALLEN. Thank you, Mr. Ambassador.

The CHAIRMAN. Well, I thank each one of you very much for your testimony. We thank you for your responses to our questions. And we look forward to staying in touch.

Thank you.

The Chair would like to call, now, the second panel, to be Dr. Lehman, Dr. Einhorn, Dr. Milhollin, and Dr. Cohen.

[Pause.]

The CHAIRMAN. Gentlemen, thank you very much for your patience this morning. We've had good dialog, and we look forward to another important set of testimonies from each of you.

I'm going to ask you to testify in the order in which I introduced you. And that would be, first of all, Dr. Lehman, to be followed by Dr. Einhorn, Dr. Milhollin, and Dr. Cohen.

Your full statements will be made a part of the record. And if you would summarize, why, we would be pleased.

Dr. Lehman.

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

Dr. LEHMAN. Mr. Chairman, you've already had to listen to four very distinguished friends of ours, and there's three very good friends to come, so I will be exceedingly brief.

It won't surprise you that the heart of my position is that the—nonproliferation should not only be integral, it should be central to our strategic partnership with India. It should not be viewed as a tradeoff, but, rather, we should have net benefit in nonproliferation from this endeavor. And I think the Senate should make it clear that that ought to be a key purpose of the strategic partnership.

My own view has been that engaging India on civil nuclear cooperation as a part of our nonproliferation strategy is long overdue. Only by bringing India into the broader nonproliferation regime can we strengthen our efforts to combat WMD and create the conditions under which India can shoulder the responsibilities that are expected of leading countries with advanced nuclear technology. But there are challenges, and there are risks.

The nonproliferation regime has long been under stress because of the spread of dual-use technology, too much insistence on one-size-fits-all solutions for very different circumstances, an inability to work with the nonparties to the NPT, and the failure to enforce compliance. For 14 years, North Korea has developed nuclear weapons, after being discovered secretly working on fissile-material production, in violation of the NPT. And now, Iran is following the same path.

India could do much to help within its borders, in South Asia, in other troubled regions, in international fora, and around the globe. But working with India will not be easy. Over many years, I have learned that India is a country that has difficulty taking yes for an answer; in part, because domestic and regional politics are filled with spoilers.

In the short run, frustration and disappointment will be common. But if the momentum of the joint statement can be sustained, the long-run achievements can be significant.

Reasonable people can disagree over what we can achieve and when we can achieve it. If momentum created by the joint statement collapses, however, we will not return to the status quo ante. United States-Indian cooperation will be set back, but, also, the weaknesses in the existing nonproliferation regime will be stressed even more.

To keep the momentum going, the administration has proposed legislation, S. 2429, that seeks to record the principles of a bipartisan consensus between the executive branch and the Congress and establish more routine procedures so as to minimize corrosive developments and counterproductive delays at home and abroad.

Everyone here understands that easing the procedural requirements can have an effect on substance. For that reason, it is all the more important that the Congress have a clear understanding with the executive branch as to what the general goals and conditions are for permitting nuclear trade with India to begin and to continue. Congress must make clear that it will review, periodically, the Indo-U.S. strategic partnership, especially its non-

proliferation components, and that failure to meet the conditions at any time in the future would require that civil nuclear and other cooperation be revisited. Congress can also help ensure that a sufficiently ambitious and updated agenda is a part of the partnership.

Most important achievements, such as a fissile-material cutoff, will take time under any circumstances. To demand now, as a precondition, a unilateral freeze by India without China and Pakistan would bring important cooperation to a stop. Including China, Pakistan, and others will take time, so the sooner we get on with the requirements for civil nuclear cooperation, the sooner we can have concrete engagement on these issues.

As I have explained elsewhere, we need not wait for the conclusion of the FMCT and the Conference on Disarmament to begin to engage on fissile material. We will want to work with Indian policymakers and technical experts on best practices for safety and security. And this could lead naturally to joint approaches to material protection control and accountability, which, in turn, could lead to interim approaches to fissile material restraint on the way to the FMCT, perhaps involving other countries with advanced nuclear technology, such as those involved in Generation IV in ITER.

To promote our nonproliferation goals, we need embedded engagement with India, rolling up our sleeves and working closely together in areas such as export control, detection, interdiction, transparency, material security, diplomatic strategies, and the like. PSI and U.N. Security Council Resolution 1540 offer important vehicles.

But I might say that we have had discussion here today that says, on the one hand, "India has a good record, and it's now passed all of this legislation," and, on the other hand, "We're hoping that they will implement some of these objectives under, for example, U.N. Security Council Resolution 1540." That's all good.

But the reality is, in a world in which nuclear technology is widespread, and where arbitrary categories of whose nuclear "this" and whose nuclear weapons state "that" are very misleading. They have their legal importance, they have their political importance, but the reality is, we have to deal with the spread of capability and the management of intent. And that requires that we work closely together in implementation.

In short, keeping the momentum begun by the July 18 joint statement is essential to achieve our nonproliferation goals, but the Congress should also insist on clarity of purpose and commit itself to ongoing oversight. Again, the successful execution of the partnership, over time, must be the measure of merit, not the initial ceremonies or even this enabling legislation.

Thank you, Mr. Chairman.

[The prepared statement of Dr. 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: In November of last year, the committee asked me to join in its consideration of the July 18, 2005 Joint Statement of President George W. Bush and Prime Minister Manmohan Singh on civil nuclear cooperation. You have that testimony before you. Today's hearing considers the strategic and nonproliferation implications of the Joint Statement in the context of S. 2429, legislation to advance that agreement.

In the last six months, intense negotiations have taken place. Uncertainty still exists and warrants caution, but both sides have taken steps and made clarifications. Nothing has become known, however, that would cause me to change my basic conclusions and concerns, which again are my personal views. Let me briefly recall that analysis:

> 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 non-parties 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.
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> If the basic approach contained in the Joint Statement collapses, we will not return to the *status quo ante.* U.S.-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.
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> I would urge the Congress to focus on the dynamics of the process and the goals to be achieved as a result of the U.S.-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 trade-off. 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.

The legislation before you is intended to support these goals by memorializing the principles for a bi-partisan consensus between both executive and legislative branches that can provide a stable basis over time for both India and the United States to work together. Such cohesion and clarity of purpose, as the United States engages India, would be very valuable, particularly in support of our nonproliferation efforts.

That is not the same as saying that partnership with India will be easy. My own view is that the road ahead with India will be rocky, certainly when measured against the current euphoria about India even among those who have concerns about civil nuclear cooperation. The overselling of the new relationship today by many will become more obvious in the near term, but in the long term, common interests and steady foreign policy could result in achieving or exceeding expectations. This is not a certain outcome, however.

At the same time, many of the concerns about the strategic partnership's impact on nonproliferation are also overstated or manageable. Too often the friends of the NPT act as if they are rearranging the deck chairs of what their rhetoric describes as a sinking nonproliferation "Titanic." The nuclear nonproliferation regime is under stress, but the Indo-U.S. Civil Nuclear Cooperation Agreement did not put it there. Indeed, the agreement offers an opportunity to strengthen the regime through partnership with India, especially if India calls a truce in its more than thirty years guerrilla war against the NPT. Real nonproliferation needs real, embedded engagement. Again, the successful execution of the partnership over time must be the measure of merit, not the initial ceremonies or even enabling legislation.

It is right to take the time now to codify clear nonproliferation commitments that will guide the strategic partnership, but, in the future, we must also insure that the parties live up to those commitments and adjust to new challenges. We must not let time erode the emphasis on nonproliferation that should be integral to the Indo-U.S. relationship. This legislation can be consistent with that approach, but

changing circumstances could also undermine our clarity of purpose over time, particularly in nonproliferation. In the early 1990s erosion of purpose perhaps fatally damaged our nonproliferation prospects and achievements with respect to North Korea, and one sees similar developments emerging on Iran among allies, friends, and non-governmental organizations. In this age of rapidly advancing technology, time is not always on the side of nonproliferation.

S. 2429 gives emphasis to the nonproliferation objectives of the new Indo-U.S. partnership. It conditions civil nuclear cooperation on the President's determination that India:

- Has provided the US and the IAEA a credible plan to separate its civil and military facilities;
- Has an IAEA safeguards agreement in force;
- Is making progress with the IAEA "toward implementing" an Additional Protocol;
- "Is working with the United States for the conclusion of a multilateral Fissile Material Cut-off Treaty";
- "Is supporting international efforts to prevent the spread of enrichment and reprocessing technology";
- Is securing nuclear materials and technology through export controls and adherence to the Missile Technology Control Regime and the Nuclear Suppliers Group guidelines; and
- The Section 123 Agreement between the U.S. and India is consistent with U.S. "participation in the Nuclear Suppliers Group."

An eighth condition is dealt with separately, differently, and more emphatically; namely that India not "have detonated a nuclear explosive device after the date of enactment."

All of these are important conditions, not only when we begin going down this path of partnership, but also in the years ahead. The Executive Branch seems legitimately concerned that an annual process of determinations and legislative enactment would be corrosive and counterproductive over time in the real world of political give and take at home and abroad. That view is not wrong.

The CHAIRMAN. Thank you very much, Secretary Lehman.

Dr. Einhorn.

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

Mr. EINHORN. Mr. Chairman, thank you for giving me the opportunity to testify this morning.

In seeking a special exception for India, I believe the administration is running some serious risks, in terms of our nonproliferation objectives. The United States is seen as bending the rules when they no longer suit us, and the administration is seen as giving nonproliferation a back seat relative to other foreign policy and even commercial considerations. Other countries can be expected to follow our lead. Indeed, they already are.

Russia recently jumped the gun and delivered a large shipment of enriched fuel to India, even before the Nuclear Suppliers Group had changed the rules to allow such a shipment. I think this is just emblematic of what we're going to see.

There have been discussions between China and Pakistan on, perhaps, purchase of four or six additional reactors by Pakistan. It's not clear whether such a purchase would be in the context of the Nuclear Suppliers' rules or outside that context. It's hard to imagine that the Russians would have made this transfer of fuel without the precedent having been established of the United States-India deal.

In the future—and I agree with comments by Bob Gallucci earlier—countries considering whether to go nuclear are going to see

lower costs if they decided to proceed in that direction. And I think that's very unfortunate.

Now, such risks might have been offset, or at least minimized, if the Bush administration and India had agreed to steps that, on balance, would have made the deal a net nonproliferation gain. Unfortunately, I don't think this was the case.

The actions pledged by India in the nuclear deal were mainly reaffirmations of existing commitments, codifications of sound Indian practices, or measures India was already planning to take before the deal was reached. Where the deal breaks new ground was India's acceptance of IAEA safeguards at eight indigenously built nuclear reactors. But, as long as India insists on keeping substantial fissile-material production capacity outside safeguards, I think this gain is really only symbolic.

Now, the aspect of the nuclear deal that involves the greatest risk, and the one where there's the greatest potential from turning the deal from a net loss to a net nonproliferation gain is the area of fissile-material production. As it now stands, the deal would help India dramatically increase its stocks of bomb-grade material. If existing nonproliferation restrictions are lifted, India could import uranium for its expanding civil program, and free up domestic uranium supplies for weapons purposes. It would be a windfall gain for India's nuclear weapons program.

The administration made an attempt to constrain fissile-material production by proposing that most Indian nuclear reactors be placed under IAEA safeguards. India rejected that proposal and insisted on keeping eight current or planned reactors outside of safeguards and on deciding entirely on its own which future reactors to put under safeguards.

Now, of course, India will not devote all of its unsafeguarded reactors to plutonium production. Most of India's reactors will be used to generate electricity. But even if only one or two large reactors were used as bomb factories, India could produce enough plutonium for well over 50 or more nuclear weapons each year.

Now, why should we care about India's production of fissile material? After all, India is a friend. It's a responsible nuclear power. We can't imagine a scenario in which Indian nuclear weapons would be used against the United States. One reason we should care is that, especially after 9/11, we have a vital interest in limiting the availability of bombmaking materials around the world and preventing such materials from falling into the hands of terrorists.

If India steps up production—and India ramping up production is certainly a possibility under this agreement—then it's very likely, I think, that Pakistan will follow suit, and China could decide to resume production, and other countries might be encouraged to seek their own production capabilities. The more materials produced, the more difficult and costly it will be to secure those materials, and the greater the risks of nuclear terrorism.

Another reason we should care is that increased fissile material and nuclear weapons production could lead to increased tensions and a destabilizing arms competition in southern Asia involving India, Pakistan, and China. Pakistani authorities have already

suggested that they may need to adjust their strategic programs to account for the implications of this deal.

What can the Congress do, at this stage, to strengthen the nuclear deal and minimize the risks to the global nonproliferation regime? Now, the committee will be deliberating on various steps that the Congress might take, but I'd like to focus on just one. The Congress should make the United States-India deal a catalyst for curbing, or even capping, the worldwide buildup of fissile material. In particular, it should permit nuclear cooperation with India to proceed only when India stops producing fissile material for nuclear weapons, unilaterally pursuant to a multilateral moratorium, or pursuant to a multilateral fissile-material cutoff treaty. India has rejected the Bush administration's proposal that it unilaterally halt the production of fissile material. Under the approach I'm suggesting, participation in a multilateral measure that includes Pakistan and China would make India eligible for nuclear cooperation. I agree with Ron Lehman, who just mentioned that expecting India to do this unilaterally is simply not realistic.

Now, India has long supported a multilateral fissile material cutoff treaty. Indeed, in last July's joint statement India pledged to work with the United States to achieve an FMCT. Now, if this is a sincere commitment and not just another throwaway line, agreement among the key powers should be possible in a reasonably short period of time. Pakistan's participation would be crucial, but, with none of the five original nuclear powers still producing fissile material for weapons, it should be possible to bring Pakistan onboard if the United States and India and the other nuclear powers work resolutely toward this end.

Since its May 1998 nuclear tests, India has often stated that its strategic requirements are not open-ended, and that it doesn't seek nuclear parity with China or any other country. Instead, it's maintained that it requires only what it calls a credible minimum deterrent capability. If that remains the case, perhaps it will soon be ready to decide that it has enough fissile material for its deterrence needs.

Would linking nuclear cooperation to stopping fissile material production be a deal-breaker? I'm sure this is a question that's on the minds of members of this committee. Put another way: Would the Indians walk away from the benefits of the deal, including the ability to buy uranium on the world market and acceptance as a nuclear weapons state in all consequential respects, because the United States asked them to do something they are already committed to do? I don't know the answer to that question. And we won't know it until the issue is explored seriously with the Indian Government. But the right question to ask is not whether a particular approach is a deal-breaker, it's whether the approach serves U.S. interests.

At this stage, it's up to the committee and to the U.S. Congress to adopt an approach that strikes the right balance, that promotes the U.S. interest in a strong partnership with India, as well as the vital U.S. interest in preventing nuclear proliferation and nuclear terrorism. We shouldn't have to pursue one at the expense of the other.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Einhorn follows:]

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 U.S.-India agreement on civil nuclear cooperation.

The argument for overcoming the nuclear impasse with India—for altering the nuclear status quo that cut India off from international civil nuclear cooperation for over 30 years—has become increasingly persuasive. It has been clear for many years that maintaining existing U.S. laws and Nuclear Suppliers Group (NSG) guidelines prohibiting such cooperation would not succeed in inducing New Delhi to join the NPT or give up nuclear weapons. And as the Bush administration has argued, modifying those laws and guidelines for India could give a boost to U.S. relations with a rising democratic world power and assist in addressing India's growing energy needs.

The dilemma we now face is how to achieve the benefits of changing the rules without undermining the vital U.S. interest of preventing the proliferation of nuclear weapons. How, for example, can the United States seek exceptions to the rules for India without opening the door to exceptions in less worthy cases—indeed, without weakening the overall fabric of rules the U.S. worked so hard to create? How would U.S. allies and friends who had to choose between nuclear weapons and civil nuclear cooperation (and who made what the U.S. regarded as the right choice) view giving India the opportunity to have its cake and eat it too? How can we avoid conveying the impression to countries contemplating the nuclear option in the future that, if they opted for nuclear weapons, the world would eventually accept them into the nuclear club?

Given the inevitable nonproliferation risks involved in reversing three decades of U.S. law and multilateral policy to permit nuclear cooperation with India, it is essential that such a major shift be accompanied by Indian steps that, on balance, strengthen the nonproliferation regime. Moreover, a policy departure of such magnitude should be preceded by thorough discussions with the Congress and key international partners to ensure they are comfortable with the initiative and share the view that it does not undercut nonproliferation interests.

But the U.S.-India civil nuclear cooperation deal negotiated by the Bush administration doesn't meet those requirements. In the administration's eagerness for a foreign policy success, the deal was concluded in great haste, driven by the calendar of Bush-Singh meetings rather than by the seriousness and complexity of the task at hand. Key stakeholders in the U.S. Congress and the 45-nation Nuclear Suppliers Group (NSG) were not consulted in advance. While speed and exclusivity are often necessary to overcome bureaucratic and international resistance to major initiatives, this must be balanced against the need for buy-in, especially when the success of the initiative depends on approval by both the Congress and NSG. In its desire to show boldness and demonstrate a clean break with the past, the administration gave too little weight to the nonproliferation downsides and too much weight to proving to the Indians its dedication to building a qualitatively new relationship. In the process, it failed to use the leverage available to it to achieve U.S. objectives.

As a result, the deal outlined in the Joint Statement concluded when Prime Minister Singh visited Washington last July, and further elaborated on March 2nd when President Bush was in Delhi, gave the Indians virtually all that they wanted—the ability to acquire nuclear equipment and technology and desperately needed uranium on the world market, acceptance as a nuclear weapon state in all consequential respects, and complete freedom to continue and expand production of fissile material for nuclear weapons. What the U.S. got from the deal was, for the most part, speculative—the hope that a stronger partnership with India will pay strategic dividends down the road.

BENEFITS FOR NONPROLIFERATION ARE MODEST

Recognizing that much of the criticism of the civil nuclear deal would be based on its implications for nonproliferation, the administration has made a special effort to show that the deal strengthens the global nonproliferation regime. But the arguments are not very convincing.

Several of the steps promised by India are simply reaffirmations of existing commitments, including its pledges 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. Some other steps—in-

cluding adherence to the guidelines of the NSG and the Missile Technology Control Regime—were actions India was already planning to take before the July 18 th Joint Statement as part of a U.S.-Indian dialogue on technology transfer and export control. Still others—such as the promise to refrain from transferring enrichment and reprocessing technologies to countries that do not yet possess them—were codifications of existing Indian policies and practices.

The potentially significant new development was India's commitment in July to separate civilian and military nuclear facilities and put the civilian facilities under International Atomic Energy Agency (IAEA) safeguards, thereby placing them off-limits for the production of plutonium for India's nuclear weapons program. But the separation plan insisted upon by India's nuclear establishment, backed by Prime Minister Singh, and accepted by President Bush in March would put only 14 of 22 existing or planned nuclear power reactors under safeguards (including the six imported reactors India has no choice but to put under safeguards) and would allow New Delhi to decide entirely on its own which future reactors it wished to designate as civilian and submit to safeguards.

The administration has trumpeted as a major nonproliferation gain that India will have 65 percent of its thermal reactors under safeguards. As a gesture of support for the IAEA's safeguards system, India's putting eight more reactors under safeguards than it would otherwise be obliged to do is welcome. But strategically, the percentage of reactors under safeguards is meaningless.

The purpose of IAEA safeguards is to prevent non-nuclear weapon states from diverting nuclear materials from civilian facilities to a nuclear weapons program. For nuclear powers like India, which can use unsafeguarded facilities to produce fissile material for their weapons programs, safeguards covering only a portion of their facilities serve primarily a symbolic function—to reduce the perceived discrimination between countries that are obliged to accept safeguards on all their facilities (i.e., NPT non-nuclear states) and those that are not. Much more meaningful than the percentage of reactors covered by safeguards is the amount of fissile material that could be produced at facilities not covered by safeguards. Under the separation plan approved on March 2nd, India has kept open plenty of options for producing fissile material for its weapons program (including at fast breeder reactors well-suited to producing bomb-grade plutonium).

The administration claims that the nuclear deal is a major breakthrough because "for the first time" it brings India into the international nonproliferation "mainstream." In her April 5th testimony, Secretary Rice argued that: "We better secure our future by bringing India into the international nonproliferation system, not by allowing India to remain isolated for the next thirty years the way it has been for the last thirty. We are clearly better off having India most of the way in rather than all the way out."

This statement creates the impression that India today is totally outside the rules and, because of that, perhaps even a potential source of proliferation difficulties. But India, to its credit, has been moving into the nonproliferation "mainstream" for quite some time—in such areas as export controls, physical protection of nuclear materials, and interdictions of WMD-related shipments. It still has a distance to go before its export controls meet the highest international standards (and indeed the U.S. has sanctioned Indian entities for sensitive assistance to Iraq, Libya, and Iran). But it is working hard to strengthen its controls—and it will continue to do so because it is a responsible country that recognizes that nonproliferation controls are in its own self interest. The civil nuclear deal would reinforce these positive trends, but they will continue with or without the deal.

THE RISKS ARE SUBSTANTIAL

While the nonproliferation gains that can be attributed directly to the civil nuclear deal are modest, the potential downsides are substantial.

By seeking an exception to the rules for a country with which the United States wishes to build a special friendship, the nuclear deal will reinforce the impression internationally that the U.S. approach to nonproliferation has become selective and self-serving, not consistent and principled. Rules the U.S. previously championed will be perceived as less binding and more optional. In general, the deal will send the signal that the U.S.—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 and commercial goals.

If the U.S. is seen as changing or bending the rules when they no longer suit us, others can be expected to follow suit. Indeed, that already seems to be happening. Russia, which a year ago said it couldn't provide nuclear fuel to India's Tarapur reactors because of its Nuclear Suppliers Group obligations, recently sent a large fuel

shipment to those reactors, arguing (over the objections of most NSG members) that it was entitled to do so under the NSG's "safety exception." It is highly unlikely that Russia would have played so fast and loose with the NSG's rules in the absence of the U.S.-India nuclear deal. It is also not by coincidence that, not long after the U.S.-India deal, China and Pakistan began discussing additional reactor sales. It is not clear whether they will await NSG approval for such sales or simply proceed outside the guidelines of the NSG.

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

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

In the near term, U.S. plans to engage in nuclear cooperation with India will make it more difficult to address proliferation challenges such as Iran. Of course, Iran's interest in nuclear weapons long pre-dated the India deal and its motives for seeking nuclear weapons have nothing to do with the deal. But the U.S.-India agreement has strengthened the case Iran can make—and is already making—internationally and at home. Why, Iranian officials ask publicly, should Iran give up its right as an NPT party to an enrichment capability when India, a non-party to the NPT, can keep even its nuclear weapons and still benefit from nuclear cooperation? It is an argument, however flawed and disingenuous, that resonates well with the Iranian public and with developing countries around the world and weakens the pressures that can be brought to bear on Tehran.

The most serious defect of the U. S.-India nuclear deal is its failure to constrain the further production of bomb-making fissile material—plutonium and highly enriched uranium—for nuclear weapons. Indeed, as it now stands, the deal could actually help India dramatically increase its fissile material stocks.

India's indigenous uranium supplies are limited. Domestic uranium ore is of low quality and expensive to mine and process into yellowcake. Annual production is low and has difficulty keeping up with demand for both the civil energy and nuclear weapons programs. Under current nonproliferation restrictions, which prevent India from buying uranium on the world market, India will soon face serious shortages and painful trade-offs. Under the Bush administration plan to change U.S. law and NSG guidelines, India could satisfy the needs of an expanding civil nuclear energy program through imports, while freeing up its domestic uranium reserves for military purposes. It would be a windfall gain for the nuclear weapons program.

In negotiations leading up to the July 18th Joint Statement, the Bush administration proposed that India stop producing fissile material for nuclear weapons, which would have prevented India from taking advantage of freed-up uranium supplies for weapons purposes. India rejected the proposal. The administration then made a further attempt to limit fissile material production by proposing that most Indian nuclear facilities, including its fast breeder reactors, be placed under IAEA safeguards and therefore made ineligible for weapons plutonium production.

But India's nuclear establishment dug in its heels, calling publicly for minimizing safeguards coverage and avoiding constraints on India's bomb-making capacity. Prime Minister Manmohan Singh, already under attack on the nuclear deal from his left-wing coalition partners, backed up the nuclear establishment's demands. Anxious to conclude the nuclear deal lest the Delhi summit be seen as a failure and calculating that Singh had less political room for maneuver than President Bush, the administration threw in the towel on placing meaningful limits on India's fissile material production capacity.

As a result, a third of India's reactors that currently exist or are under construction will be outside safeguards and available for plutonium production. Any future reactor, thermal or breeder, can be designated by India as outside safeguards. Of course, the Indians will not devote all their unsafeguarded nuclear reactors to weapons plutonium production. Indeed, given India's ambitious nuclear energy goals, we would expect most of those reactors to be used for civilian purposes. But even if only two or three large reactors were used as bomb factories, India could produce enough plutonium for well over 50 nuclear weapons each year.

Why should the U.S. care about Indian production of fissile material? After all, India is a friend and a responsible nuclear power. One reason we should care is that, especially after 9/11, we have a vital interest in limiting the availability of bomb-making materials around the world and preventing such materials from falling into the hands of terrorist groups who, we know, are actively seeking to acquire them. If India steps up production, Pakistan can be expected to follow suit, China could decide to resume production, and others may be encouraged to seek their own production capabilities. The more materials produced, the more difficult and costly it will be to secure them, and the greater the risks of nuclear terrorism.

Another reason we should care about stepped up Indian production of fissile materials is that it could lead to increased tensions and destabilizing arms competition in southern Asia, involving India, Pakistan, and China. Pakistani authorities have publicly taken special note of the failure of the U.S.-India nuclear deal to limit Indian fissile material production. Reportedly, the Pakistani National Command Authority recently met to assess the impact of the deal and consider adjustments Pakistan may need to make to its own strategic plans. President Musharraf said, "We cannot remain oblivious to the changes evolving in the region. All the steps will be taken for the defense, security, and safety of Pakistan." Moreover, China has warned that the deal threatens to "undermine global disarmament moves," suggesting that Beijing may also decide that it needs to respond programmatically.

Of course, continued or even stepped up nuclear weapons production in the region would not necessarily translate into increased tensions. Relations between Indian and Pakistan and between Indian and China have both been improving in recent years. But India's insistence on keeping substantial fissile material production capacity outside of safeguards—thereby keeping options open for a substantial strategic build-up—could raise suspicions about its intentions in the minds of its neighbors and have an adverse effect on the processes of reconciliation underway in the region.

CAN THE DEAL BE STRENGTHENED?

As it currently stands, the U.S.-India civil nuclear cooperation deal is a net loss for nonproliferation. Can it be transformed into a net nonproliferation gain? The answer, at this stage, lies mainly with the U.S. Congress.

The Bush administration and the Indian Government would naturally like to see the Congress approve the deal as is, on the basis of the draft legislation the administration has already submitted, and to do so as quickly as possible. But especially given the unprecedented character of the deal and its far-reaching implications, Congress has a responsibility to scrutinize it carefully before passing judgment and to adopt any modifications or conditions it deems necessary to protect U.S. interests, including in preventing the proliferation of nuclear weapons or fissile materials.

Implementation of the civil nuclear deal will require Congressional approval of amendments to the Atomic Energy Act as well as a bilateral U.S.-India agreement for peaceful nuclear cooperation. In addition, India and the IAEA will have to conclude an agreement that applies IAEA safeguards to Indian nuclear facilities as well as an Additional Protocol to that agreement. And finally, the NSG will have to agree by consensus to modify its guideline that currently precludes nuclear cooperation with states outside the NPT. All of these arrangements are interrelated. For example, the Bush administration's willingness to seek changes in U.S. law and NSG policies depended on India's willingness to accept IAEA safeguards on certain Indian nuclear facilities in perpetuity.

Before deciding to amend the Atomic Energy Act, the Congress should therefore insist on seeing as much of the overall package as possible, including the IAEA-India safeguards agreements (concluded but not necessarily already approved by the IAEA Board) and a concluded U.S.-India agreement for peaceful nuclear cooperation. The need to assess these arrangements as a package is particularly justified because some of them will be unprecedented. India has put the IAEA on notice that its safeguards agreement will not follow standard models but will be "India-specific." The meaning of India-specific is not yet clear. Moreover, because India is a nuclear power that must still be treated as a non-nuclear state for the purposes of U.S. law, the U.S.-India peaceful nuclear cooperation agreement will be different from any previous U.S. agreement for cooperation. Negotiations on the IAEA-India safeguards agreements and the U.S.-India agreement for peaceful nuclear cooperation have already gotten underway; and so assuming those negotiations go smoothly, Congressional insistence on looking at the package as a whole need not cause significant delays.

Congress should not permit normal approval processes to be short-circuited. The Atomic Energy Act provides that agreements for peaceful nuclear cooperation that

meet all the requirements of U.S. law will be approved automatically if the Congress does not pass a joint resolution of disapproval within 90 days; whereas agreements that do not meet all the statutory requirements (i.e., in cases where those requirements are waived) must be approved by both houses of Congress. Although the U.S.-India agreement for cooperation will not meet all the requirements of law (it is the first of about 40 such U.S. agreements not to do so) and will therefore require a waiver (because India will not have safeguards on all of its nuclear facilities), the administration is nonetheless proposing that the agreement be fast-tracked with the much less demanding approval procedure. Clearly, the India case deserves more scrutiny, not less. Congress should insist that both houses of Congress get the opportunity to review and vote on the U.S.-India agreement.

In terms of the substantive elements of the U.S.-India civil nuclear deal, there are several the Congress will want to probe and understand more clearly. Among them will be whether an Indian nuclear test explosion—or some other Indian actions—would trigger the termination of U.S. nuclear cooperation. A related question is whether the U.S. would be committed to assist India in obtaining reactor fuel from third parties if U.S. fuel supplies had to be cut off as a result of an Indian nuclear test or some other action.

Based on its review of the nuclear deal, Congress may wish to adopt legislation that strengthens the deal and minimizes the risks it poses to the global nonproliferation regime.

One means of minimizing those risks would be to restrict the scope of nuclear cooperation with India that would be permitted by the new legislation. A long-standing element of the nonproliferation regime has been the "NPT preference policy," which has meant giving NPT parties benefits in the civil nuclear energy area not available to those outside the NPT. A way of maintaining some preferential treatment for NPT parties would be to modify U.S. law (and NSG guidelines) to permit nuclear-related exports to India 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 uranium, enriched fuel, nuclear reactors and components, 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. The British and French, both of whom are strong supporters of nuclear cooperation with India, reportedly believe that nuclear cooperation with India should not include fuel-cycle equipment and technologies.

Another way of reducing nonproliferation risks would be to implement the nuclear deal in a country-neutral manner—not as a special exception to the rules for India alone, which is what the administration has proposed. A problem with the country-specific approach is that it accentuates concerns that the U.S. is acting selectively on the basis of foreign policy considerations rather than on the basis of objective factors related to nonproliferation performance.

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 Congress might consider permitting nuclear cooperation with any state not party to the NPT that meets certain criteria of responsible nuclear behavior (e.g., moratorium on nuclear testing, effective export controls, strong nuclear security measures, cooperation in stopping illicit nuclear trafficking). While such an approach would be country-neutral, it would still enable the U.S. Government (and other NSG members) to distinguish among non-parties to the NPT in terms of whether—and how soon—they would be eligible for nuclear cooperation.

By far the most important way to reduce nonproliferation risks—and to turn the civil nuclear deal into a net nonproliferation gain—would be for Congress to take action that would make the deal a catalyst for curbing or even capping the worldwide buildup of fissile material. In particular, Congress should adopt legislation that permits nuclear cooperation to proceed when India stops producing fissile material for nuclear weapons, either by ceasing production unilaterally, by joining other nuclear powers (including China and Pakistan) in a multilateral moratorium, or by adhering to a multilateral, verifiable treaty banning the production of fissile material for nuclear weapons (i.e., a fissile material cutoff treaty, or FMCT).

In the run-up to the July 18th Joint Statement, India rejected a Bush administration proposal that it stop producing fissile material for nuclear weapons. But it is possible New Delhi might take a different view toward ending production not unilaterally but as part of a multilateral moratorium or treaty. After all, India has long declared its support for a multilateral FMCT. Indeed, in their July 18th Joint Statement, India and the United States agreed to work together to achieve an FMCT. If that is a serious undertaking and not a throwaway line, it would not be unrealistic for the key nuclear powers to reach agreement on a cutoff in a reasonably short period of time. The U.S., UK, France, and Russia have all ceased producing fissile

material for nuclear weapons as a matter of policy. China is also believed to have stopped production. With intensive diplomatic effort, it should be possible for India and the U.S. to persuade Pakistan to join them and these other nuclear powers in a multilateral moratorium pending completion of a formal multilateral treaty. By linking nuclear cooperation to the termination of fissile material production, Congress could provide additional incentive for Washington and New Delhi to reach agreement at an early date.

CONCLUSION

In seeking to make India an exception to longstanding nonproliferation rules, the Bush administration has given India virtually all that it wanted and has run major risks with the future of the nonproliferation regime. It is therefore reasonable to ask India to take steps to minimize the risks and demonstrate its own strong commitment to fighting proliferation. But the administration has settled for far less than what is required to make the civil nuclear deal a net gain for nonproliferation.

India has long wanted to be regarded as a legitimate member of the nuclear club, not a pariah or outsider. The administration is right that it is time that India be brought into the nonproliferation mainstream. But with membership comes responsibilities—not just in ensuring against leakage of nuclear equipment or technology to other countries but also in practicing strategic restraint that can increase international security generally. India has stated that it is prepared to assume the same responsibilities and practices as other nuclear powers. It so happens that the five original nuclear weapons states have all stopped producing fissile material for nuclear weapons. Should India not be asked to join them?

Indian leaders might be expected to say that, since the original five nuclear powers have produced more bomb-grade material than India, India should be entitled to catch up. But since its May 1998 nuclear tests, India has often stated that its strategic requirements are not open-ended and that it doesn't seek nuclear parity with China or any other country. Instead, it has consistently maintained that it requires only a "credible, minimum deterrent capability." If that remains the case, perhaps it can soon decide that it has accumulated sufficient fissile material for its minimum deterrent needs and can afford to forgo further production.

A multilateral cap on the accumulation of fissile material would make a major contribution to fighting nuclear proliferation and preventing nuclear terrorism. Making a U.S.-India civil nuclear deal a catalyst for achieving such an outcome would transform the deal from a substantial loss to a substantial gain. It would enable the U.S. to advance its strategic interest in a qualitatively improved relationship with India as well as serve its nonproliferation interests—not promote one at the expense of the other. Congress can play a key role in achieving such an outcome.

The CHAIRMAN. Thank you very much, Dr. Einhorn.

Dr. Milhollin.

STATEMENT OF DR. GARY MILHOLLIN, DIRECTOR, WISCONSIN PROJECT ON NUCLEAR ARMS CONTROL, WASHINGTON, DC

Dr. MILHOLLIN. Thank you very much, Mr. Chairman. I'd like to thank you for inviting me to testify today on the administration's plan for nuclear cooperation with India. And I would like to say that I think the committee is right to focus on the strategic aspect of the proposed cooperation.

I would recommend to the committee that it ask the following question. Why, after 9/11, when we should be doing all we can to fight terrorism, and when we talk almost every day about states or terrorists getting their hands on an atomic bomb, should we weaken the controls on the export of nuclear material? Is this the right time to do that? And, if we do it, will it make us safer?

We've heard witnesses talk about the diplomatic and trade aspects of this arrangement, but this is really a change in our export control laws. That's what's being proposed. And we have to focus, specifically, on what it is we're trying to do. And it seems to me clear that if we look at this carefully, we'll conclude that it doesn't make us more secure, it puts us more at risk.

Why is that? First, it is impossible to weaken export controls for India, which is what this deal does, without weakening them for everyone else. The "everyone else" includes Iran, Pakistan, and even terrorist groups who are trying to get their hands on the means to make weapons of mass destruction.

The great flaw in the administration's proposal is that it considers India to be an isolated case. In the world we live in today, it would be nice to be able to do that, but it's, in fact, impossible, because export controls are administered through regimes. The committee is familiar with these regimes, but it's important to notice that a cardinal principle of all the regimes is that they are country-neutral, they do not make exceptions for specific countries. And there is a very good reason for that. If the United States decides to drop controls to help one of its friends—in this case, India—other supplier countries will do the same for their friends. China will drop controls on its friend Pakistan, and Russia will drop controls on its friend Iran. There is no way to convince either China or Russia not do that. This is the way international regimes work.

Once we start tinkering with the regimes, they could unravel very quickly; and, in my judgment, will unravel. As one expert in the Pentagon told me once upon a time, "They're like a springloaded box; if you raise the lid, you may never get it back on again."

So, from a general strategic point of view, with this cost in mind, why is it that we're helping India? Only three countries have refused to sign the Non-Proliferation Treaty: India, Israel, and Pakistan. Of the three, India is the least important, strategically. Under any calculation of our strategic interests, Pakistan ranks higher than India. Pakistan is essential to our ongoing military and political efforts in Afghanistan. Pakistan is essential to our campaign against al-Qaeda. Pakistan is a leading power in the Muslim world; a world with which the United States needs better relations.

Israel has always been a close United States ally, and will continue to be. Israel would like to have United States nuclear cooperation. Israel is also located in a part of the world that is of highest importance to United States foreign-policy interests.

In any competition for strategic favor from the United States, India finishes a distant third.

So, why choose India now for preferential treatment? I can only see one answer. India is no different today than it was in 1998, when it tested nuclear weapons. The answer is, India is the biggest market.

Secretary Rice, when she testified to this committee on April 5, said that the agreement with India was crafted with the private sector in mind. She mentioned a $13 billion deal by Boeing, purchases of reactors, American reactors, by India, and opportunities for United States companies to enter the lucrative and growing Indian market.

If you look at this from the point of view of other countries, the message is pretty clear. Export controls are now less important to the United States than money. But a decision to put money above export controls is precisely what we don't want China and Russia

to do when they sell to Iran. We don't want China and Russia to tell us that money in their pockets is more important than stopping Iran's march toward the bomb. Yet that is exactly what they will tell us.

So, those are the costs of the administration's plan. What are the benefits?

We've already heard a discussion about the possibility that India will place 14 of 22 reactors under inspection. It seems to me that that's a little bit like a person with a 22-room house who says that the police can inspect 14 rooms, but not the other 8. Why would any policeman in his right mind accept that offer? In fact, putting additional reactors under inspection does not create any benefit, in terms of nonproliferation, because India has calculated how much plutonium it's going to need for bombs, and it has kept out a sufficient number of reactors to make that much plutonium.

The other benefit that the administration cites is that India may buy American reactors. The precedent is our agreement with China. I'm sure that the committee remembers the intense debates we had over the China Cooperation Agreement. After we finally agreed to cooperate with China, how many reactors did China buy? The answer is: Zero. Not a single American reactor. The import orders went to France, Russia, and China. I don't think this time we're going to do any better. India can already build domestic reactors that are cheaper than ours. They can turn to the Russians for imports, because the Russians' will be cheaper, and there will be fewer conditions. The French and the Canadians will also compete with us. So, I think the chance that we're going to defeat this competition is virtually nil.

The last point I'd like to make has to do with the power of Congress, which I think is very important, and I'm not sure that it's been covered.

Under present law, the administration must obtain the consent of Congress before putting into effect an agreement that does not satisfy our nonproliferation criteria. This requirement for congressional approval encourages the administration to make good agreements. But, under the proposed legislation, such an agreement would automatically go into effect 90 days after it's presented to Congress, unless Congress votes to block it. That vote could be vetoed, so Congress would need a two-thirds majority to block or amend an agreement under this new legislation.

Congress is also being asked to vote before seeing any agreement. We've been talking about an agreement with India as if there were actually an agreement. There is no agreement. Congress is being asked to vote before it knows what it's voting on.

There is no rush. I recommend that Congress wait until it sees the actual agreement before it takes any action. If it does that, Congress will retain its oversight authority and will encourage the administration to negotiate an agreement that protects our strategic interests.

Thank you very much.

[The prepared statement of Dr. Milhollin follows:]

PREPARED STATEMENT OF DR. GARY MILHOLLIN, DIRECTOR, WISCONSIN PROJECT ON NUCLEAR ARMS CONTROL, WASHINGTON, DC

Mr. Chairman, and members of the committee, I would like to thank you for inviting me to testify today on the administration's plan for nuclear cooperation with India, and particularly on the plan's strategic impact.

The committee is right to emphasize the strategic nature of the plan. The legislation to implement it goes to the heart of our national security. The bill now before Congress would change our export control laws—laws that have been in effect for almost thirty years, and that were adopted in response to India's nuclear test in 1974. It is worth remembering that India achieved that test by diverting plutonium made with a peaceful U.S. nuclear export, which is why India had to call the test a "peaceful nuclear explosion."

The broad question before us is this: Why, after 9/11, when we should be doing all we can to fight terrorism, and when we talk almost every day about states or terrorists getting their hands on an atomic bomb, should we weaken the controls on the export of nuclear material? Is this the right time to do that? And if we do it, will it make us safer?

These are the questions that Congress should ask. So far, the debate has emphasized diplomacy and trade. The most important questions, however, are strategic. The answers, I'm afraid, are that the legislation will not make us safer. Instead, it will put us more at risk.

Why? Because it is impossible to weaken export controls for India without weakening them for everyone else. The "everyone else" includes Iran, Pakistan, and even terrorist groups—working through a national government or not—who might want to buy the means to make mass destruction weapons. And if we do weaken export controls for everyone, which is bound to happen if we weaken them for India, we may hasten the day when a nuclear explosion destroys an American city.

The great flaw in the administration's proposal is that it considers India an isolated case. This is simply impossible. To do so contradicts the fundamental principle upon which export controls are based. The controls today are administered through international regimes. The regimes include the Nuclear Suppliers Group and the Missile Technology Control Regime. The first tries to stop the spread of nuclear arms, the second the missiles to deliver them.

A cardinal principle of both regimes is that they are "country neutral." That is, they do not make exceptions for specific countries. The MTCR uses objective criteria to target "projects of concern" for missile proliferation. The NSG requires all nonnuclear weapon states that import items designed or prepared for nuclear use to accept comprehensive inspections. Under such inspections, all critical nuclear material must be accounted for, regardless of the country. In this way, the regimes have avoided making politically motivated decisions.

There is good reason for this practice. If the United States decides to drop controls to help one of its friends—in this case India—other supplier countries will do the same for their friends. China will drop controls on its friend Pakistan, and Russia will drop controls on its friend Iran. There will be no way to convince either China or Russia not to do that. They will say that what is good for your friend is good for mine. If you want to develop your market in India, I want just as much to develop my market in Pakistan or Iran. No country will give up a market unless other countries do the same. That is the way international regimes work.

The regimes also rely on coordination, and on consensus. The United States acted unilaterally when it made its deal with India. There was no reported notification or coordination with the NSG or MTCR before the deal was concluded. By violating the consensus norm of these regimes, the United States has invited other members to act the same way. If they do, they may make unilateral deals with Iran or Pakistan without informing the United States. This risk has been created by our own action, and certainly does not make us safer.

The regimes also require enforcement. The member countries are required to investigate and shut down unauthorized exports by their own companies. Since the attacks on 9/11, we have been asking the other countries to do more of this. But can we really ask them to crack down on companies that are exporting the same kind of goods to Pakistan or Iran that we are exporting to India? The same kind of technology will be going to the same kind of projects. What sense will there be in trying to interdict the one and not the other? Even if we can convince the other supplier countries to give lip service to an exception for India, it is unrealistic to expect them to follow through with enforcement against their own companies.

Once we start tinkering with the regimes, they could unravel quickly. As one expert in the Pentagon told me, they are like a spring-loaded box. If you raise the lid, you may never get it closed again. What he meant was that the United States has

always set the standard for export controls, and other countries have often taken a long time to follow the U.S. lead in strengthening them. But if the United States decides to loosen controls, it will take only an instant for other countries to follow. The lid will fly off, and we may never be able to get it back on.

I would also like to add a personal note to this point. I have just returned from trips to Jordan and the United Arab Emirates, where I helped provide training and information to assist these countries in improving their export controls. I hope to go to Turkey next. These are all Muslim countries in which the U.S. government is trying to improve export control performance. The export control officials in these countries are now the front-line troops in the fight against terrorism. They must do their jobs well in order to keep terrorists from getting their hands on dangerous technology.

In Jordan, one of the first questions I was asked was: "What about India? Why has the United States decided to export to India?" There is no way I, or any other American, can answer that question in a credible way in a Muslim country. India, Pakistan and Iran all decided to develop nuclear weapons under the guise of peaceful nuclear cooperation. From this standpoint, they are indistinguishable. Why punish Pakistan and Iran but not India? They are all guilty. There is no persuasive reason for treating them differently. India is no different today than it was in 1998, when it tested a nuclear weapon. So, the second question, hiding behind the first, is "what is the ground for the discrimination?" None of us wants to think of the word religion, but it is a word that is in the mind of Muslim countries. If the United States is only against proliferation by countries it does not like, which now appears to be the case after the deal with India, why does it like some countries but not others?

Congress should look deeply into these questions before approving the legislation. So far, it does not appear that anyone has done so, including the administration. The administration's plan was arrived at hastily, with no consultation with other regime members, and virtually none with Congress. If the press is to be believed, there was even little consultation with arms control experts within the administration itself. The proponents of the deal have presented it as if it were simply a matter of trade and diplomacy. Congress should insist upon a full review of the strategic impact.

If one looks at the strategic side, it is hard to see why we should be helping India. Only three countries have refused to sign the Nuclear Nonproliferation Treaty: India, Israel and Pakistan. Of the three, India is the least important strategically.

Under any calculation of America's strategic relations, Pakistan ranks higher than India. Pakistan is essential to our ongoing military and political efforts in Afghanistan. Pakistan is also essential to our campaign against al-Qaeda. Without the aid of General Musharraf, we would have a much harder time accomplishing our goals in either of these endeavors. Pakistan is also a leading power in the Muslim world, a world with which the United States needs better relations. Yet, our deal with India is a blow to General Musharraf's prestige at best, and at worst a public humiliation. We should not give General Musharraf more trouble than he already has.

Israel, of course, has always been a close U.S. ally, and will continue to be. Israel would like to have U.S. nuclear cooperation. In addition, Israel is located in a part of the world that is of the highest importance to U.S. foreign policy interests.

In any competition for strategic favor from the United States, India finishes a distant third.

Is India nevertheless important because it will become a counterweight to China? Proponents of the deal so argue. But the notion that India might assist the United States diplomatically or militarily in some future conflict is pure speculation. India's long history as the leader of the "non-aligned" movement points in the opposite direction. India will follow its own interests as it always has. An example is India's decision to train Iranian sailors and import Iranian gas. In addition, India shares a border with China, is keen to have good relations with China, and does have good relations with China. It will not sour such relations simply from a vague desire to please the United States.

This India-as-counterweight-to-China theory reminds one of the argument made by the first Bush administration in the 1980s, when it contended that the United States should export sensitive dual-use equipment to Saddam Hussein in order to build up Iraq as a counterweight to Iran. U.S. pilots were later killed in Iraq trying to bomb things that U.S. companies had provided. History shows that such predictions can be dangerous.

Then why choose India for preferential treatment? If it is not because of our need to fight terrorism, and not because of our desire to reward a faithful ally, what is it? There seems to be only one answer: India is the biggest market. Secretary of

State Rice readily admits the commercial interest. On April 5 she testified to this committee that the agreement with India was "crafted with the private sector firmly in mind." She cited a 13 billion dollar deal by Boeing; she cited the hope of reactor sales by our nuclear industry; she cited the opportunity for "U.S. companies to enter the lucrative and growing Indian market."

She might also have mentioned India's defense market. That market seems to be the one that is really motivating the deal. India is shopping for billions of dollars worth of military aircraft, and the administration is hoping it will buy both the F-16 and the F-18. According to the American press, officials in the defense industry and the Pentagon are saying that the main effect of the nuclear deal will be to remove India from the ranks of violators of international norms. And once this change in India's status occurs, there will be no impediment to arms exports. The Russian press is even more explicit. It complains that in addition to "recognition of India's nuclear status by the United States," the nuclear deal "opened the door to the Indian market for American arms merchants," with the result that Russia may be squeezed out.

Boiled down to the essentials, the message is clear: Export controls are less important to the United States than money. They are a messy hindrance, ready to be swept aside for trade. But, a decision to put money above export controls is precisely what we don't want China and Russia to do when they sell to Iran. We don't want China and Russia to tell us that money in their pockets is more important than stopping Iran's march toward the bomb. But China and Russia are now hearing the new commercial message coming from America, and they are not stupid. If they see that we are willing to put money above security, and willing to take the risk that dangerous exports won't come back to bite us, they will do the same. Everyone's security will diminish as a result.

Thus, this legislation has clear costs to our security. Are these outweighed by the benefits? What are the benefits?

The principal benefit cited by the administration is that India will place 14 of its 22 power reactors under inspection. But, as others have pointed out, this leaves a great number of reactors off-limits. In fact, the reactors that are off-limits will be sufficient to produce enough plutonium for dozens of nuclear weapons per year. This is more than India will ever need. India is not restricting its nuclear weapon production in any way. Therefore, there is no "non-proliferation benefit" from such a step.

In effect, India's offer is like that of a counterfeiter with a 22 room house, who offers to let the police look into 14 rooms as long as they stay out of all the others. Why would any policeman in his right mind accept such an offer, or want to inspect one of the 14 rooms? It would be the only place where he was sure not to find anything. It would waste his time, just as it will waste the time of international inspectors to look at India's 14 declared reactors. Everyone knows that it will be the eight undeclared ones that make the bombs. India, in fact, appears to have calculated the number of reactors to put off-limits according to how much plutonium they will make. India has assured itself that the resulting amount of plutonium will be enough to allow it to continue making bombs at an unfettered pace.

This point about wasting inspection time may seem minor, but it isn't. The International Atomic Energy Agency has a limited number of inspectors. They are already having trouble meeting their responsibilities. To send them to India on a fool's errand will mean that they won't be going to places like Iran, where something may really be amiss. Unless the Agency's budget is increased to meet the new burden in India, the inspection of India's declared reactors will produce a net loss for the world's non-proliferation effort.

The other major benefit that the administration cites is that India may buy American reactors. Such a possibility exists, but is remote. The precedent is our experience with China. Some members of the committee may remember the intense debate in Congress over the U.S. nuclear cooperation agreement with China in the 1980's. At the time, our industry was citing the large number of reactors that China was planning to buy, and predicting that many of the orders would come to us. How many American reactors did China actually buy? The answer is: none. Exactly zero. The main effect of China's agreement with us was to increase the number of vendors who were in competition. The result was to drive the price down for the Chinese reactor buyers. That was good for China, but did nothing for us. The Chinese import orders went to France, Russia and Canada.

We are not likely to fare any better this time. New Delhi is already building a string of reactors on its own that are less expensive to put up than ours. And if India wants to import reactors, it can turn to the Russians, who will charge less money and attach fewer conditions, and who are already ahead of us in the Indian market. It can also turn to the French or even perhaps the Canadians. All of these

countries will compete with us if we sell to India. The chance that we will defeat this competition is slim.

The administration also argues that India has a great need for nuclear power to meet its electricity demand. This too is far-fetched. India has been generating electricity with nuclear reactors for more than 40 years. Yet, reactors supply only about 2 percent to 3 percent of its electricity today. If reactors are so vital to India's energy needs, why hasn't India built more? The answer is that reactors have not turned out to be as safe, or as clean, or—most important—as economical as originally thought. Nuclear power has been virtually insignificant in India's energy mix in the past, and will be no more important in the future. It is worth noting that the United States hasn't ordered a new reactor for about thirty years. Why do we expect India to buy American reactors when even we aren't buying them?

I would also like to comment on the effect that the administration's new policy will have on missile proliferation. President Bush and Indian Prime Minister Manmohan Singh agreed to cooperate in "space exploration," including "satellite navigation and launch." This language is broad enough to allow missile-useable components and technology to be exported. The United States seem entirely ready to permit such sales. The U.S. Commerce Department recently dropped restraints on American exports of missile-related equipment to three subsidiaries of the Indian Space Research Organization, despite the fact that all three are active in Indian missile development. This appears to be only a first step in a general loosening of U.S. missile export controls for India.

It is difficult to predict where this will lead. One cannot help a country like India build better space launchers without helping it build better missiles. Our experience with China is again the precedent. In the 1990's China got crucial American help in rocket design, guidance, launch operation, and payload integration, all of which were directly useable in making intercontinental ballistic missiles. The help came from American companies that were supposed to be engaged only in a peaceful space effort.

India will be no different. India, in fact, is the first country to develop a long-range nuclear missile from a civilian space-launch program. India's Agni missile, tested in 1989, was built by using the design of the American "Scout" space rocket. India imported the blueprints from NASA under the cover of peaceful space cooperation.

India has every intention of building nuclear missiles that will reach the United States. For some years, India has been working to develop a nuclear submarine, which will be able to threaten every coastal city in the world with a nuclear payload. India has also been working on an intercontinental ballistic missile, known as the Surya, which will fly much farther than any target in China. Two questions come to mind. Why should India want to reach such targets? And does the United States really want to make it easier for India to succeed?

The final point I would like to make has to do with the power of Congress. That power will be greatly reduced if the administration's legislation passes.

The important question to ask about the power of Congress is this: Why is this bill necessary? What is wrong with present U.S. law?

Under the present Atomic Energy Act, the president could make an agreement tomorrow for nuclear cooperation with India. All the president has to do is submit to Congress what is known as an "exempt" agreement—that is, an agreement that does not satisfy the Act's present criteria for nuclear cooperation.

India does not satisfy the criteria because it has refused to put all of its nuclear material under international inspection and is, in fact, running a secret nuclear weapon program. That is why the president must "exempt" the agreement before submitting it to Congress. After such a submission, Congress must adopt a joint resolution saying that it favors the agreement. If Congress disagrees, or does not act, the agreement does not go into effect.

The president must meet a high standard to justify the exemption. He must find that holding India to the present criteria "would be seriously prejudicial to the achievement of United States non-proliferation objectives" or that it would "otherwise jeopardize the common defense and security." He must also persuade Congress that he is right, because Congress must take action for the agreement to operate.

Why hasn't the president taken this course of action? Apparently, because he cannot meet the standard. He cannot find that it "would be seriously prejudicial to the achievement of United States non-proliferation objectives" to make India meet the existing criteria. To the contrary, it would advance U.S. non-proliferation objectives if India met the criteria, because India would be giving up its bomb program and putting its fissile material under international inspection. That would be a clear gain for non-proliferation instead of a loss.

Because the administration cannot meet the present standard, the administration has asked Congress to lower it. India would only have to meet a list of weaker criteria that the administration is already confident India can comply with.

But the administration has not been content to stop there. It also wants to shift the burden of proof. Under the new legislation, the burden of proof would shift to Congress. Instead of having to convince Congress to act after submitting an "exempt" agreement, the agreement would take effect automatically after 90 days unless Congress voted affirmatively to block it. Any such vote could be vetoed, so Congress would have to muster a 2/3 majority in both houses in order to have its view prevail. That is in direct contradiction to present law, under which an exempted agreement would have to be affirmatively agreed to by a joint resolution.

Thus, the effect of the bill is twofold: it makes it easier for the president to exempt an agreement, and it makes it harder for Congress to prevent an exempted agreement from taking effect. If Congress wishes to preserve its existing power, it could require that an exempted agreement still be reviewed under the present process. The administration has not advanced any persuasive reason why the process of Congressional review should be changed.

Preserving the existing process would have several advantages. Congress would have more than 90 days to study the agreement; Congress would not have to muster a veto-proof majority to block the agreement, or attach conditions to it; and Congress would be able to see the actual agreement before taking a vote.

Under the new legislation, Congress is being asked to lower the standards for nuclear cooperation and to shift the burden of proof before any agreement with India has been reached. Congress is being asked to vote without knowing what kind of inspections India will eventually agree to, without knowing whether India will really improve its own export controls, and without knowing whether India's plan for separating its civilian from its military nuclear facilities is "credible," as the new criteria require. Congress would be buying a pig in a poke. It would be giving the administration carte blanche authority to make an agreement that, because of Congress' reduced power of review, there would be little opportunity to change.

The CHAIRMAN. Well, thank you very much, Dr. Milhollin.

Now, the Chair needs to make a tactical decision; namely, to vote and to come back. And I apologize for the delay, but I'm going to recess the hearing for 10 minutes, and then we will be able to do justice to Dr. Cohen, so he may give his full testimony, then have a short question period.

I apologize, but this is the nature of our business today.

And the committee is recessed for 10 minutes.

[Recess.]

The CHAIRMAN. The committee is called to order.

And we'll call now on Dr. Stephen Cohen for his testimony.

STATEMENT OF DR. STEPHEN P. COHEN, SENIOR FELLOW, THE BROOKINGS INSTITUTION, WASHINGTON, DC

Dr. COHEN. Thank you, Mr. Chairman. I'm honored to again appear before you and the committee. As I have written testimony, I'll just summarize that so we can get to Q&A.

I did want to mention to Senator Hagel that Brookings is going to start a bottoms-up examination of nonproliferation policy. Mike O'Hanlon and I are going to write it, and we're going to look at these issues, and certainly the vital distinction between Non-Proliferation Treaty and the nonproliferation regime. I support this agreement. In a sense, it builds a spare room onto the NPT house. Since 1990, I've argued for a halfway house which would accommodate India, and perhaps other states that met certain criteria. This agreement does that, although it is not perfect. I certainly see some minor problems, but I think that, in the long run, it is the agreement that we should go with.

I was asked by committee staff to talk about history. Perhaps unique among the panelists, I've been in touch with this issue and

in contact with the Indian debate on nuclear weapons since 1963, when I first went to India as a graduate student. And I've lived in India for a total of 6 years, almost every decade since then, coincidentally during some of the years when the Indians were in the midst of a major debate about nuclear strategy and nuclear policy.

I won't go into the details of that debate, but I drew two conclusions from essentially 45 years of watching the Indians talk about nuclear weapons.

One is that, in most cases India was responding to nuclear developments elsewhere. It was sharply divided as to the utility and morality of nuclear weapons. And until the 1998 tests, India's policy was one of maintaining an option or a recessed—that is, unannounced—deterrent. I think that could have been extended, had we not pushed them to sign the CTBT and the NPT, as a nonnuclear weapons state. In my judgment, the public policy of urging them to cap, reduce, and eliminate their nuclear program was an incentive for them to go ahead and test, to make it an irreversible decision. That's history, and we don't want to debate that now.

As opponents of this agreement have noted, India simply lied or diplomatically misled others about its small weapons program, which was buried within a larger civilian nuclear energy program, and certainly it violated the spirit of agreements reached with foreign governments concerning the peaceful use of their nuclear assistance. For that, India has been subject to 30 years of sanctions.

Second, in all of these debates among and within—in among—in India and between Indian groups, military and civil and others, purely military calculations have been notably absent. The Indian nuclear program was nurtured by a small enclave of scientists and bureaucrats, who were largely responsive, not proactive, in their thinking. As George Tanham wrote a number of years ago, Indian strategic thought is characterized by its lack of interest in military things. There was, and remains, a curious blend of extravagant idealism—epitomized in the many plans for global nuclear disarmament generated in India over the years—and Kautilyan-Machiavellian realism epitomized by the secrecy surrounding the covert weapons program.

It is my judgment that this initiative need not trigger an arms race with Pakistan, nor one between India and China. And it's certainly not a green light to India to built a thousand or more nuclear weapons. It does provide the United States with an opportunity to work with India to help prevent a broader nuclear arms race, something that is certainly not in the interest of India, Pakistan, China, or America.

Therefore, I would propose the following steps:

First, the agreement with India should be folded into legislation or policy that would develop criteria that would allow other states to enter into such a nuclear halfway house. And that halfway house, as I've written since 1990, would require a state to fulfill the obligations of a signatory of the Nuclear Non-Proliferation Treaty, even if it had tested a nuclear weapon or had possessed a nuclear weapon after the 1968 cutoff date. This halfway house would provide civilian nuclear assistance and perhaps strategic relationship in exchange for an impeccable horizontal nonproliferation record. Right now, India seems to meet most reasonable tests of what this

record should look like, as does Israel; but Pakistan and North Korea do not.

Second, the administration should undertake an initiative that would constrain vertical proliferation via a nuclear restraint regime in Asia. This initiative would include India, Pakistan, and China. Such a regime need not involve formal negotiated limits, which would be very difficult to achieve, but certainly could be based on a fissile-material cutoff, continued restraint on testing, and limited deployment of nuclear weapons—the first two feature in the Indo-U.S. Nuclear Initiative, but they need to be made multilateral, especially to ward off an arms race between Pakistan and India, or India and China.

Of course, China's decision on renewing testing will be shaped by its response to the United States. And I believe that we can continue our own ban on tests indefinitely without damaging our nuclear preparedness.

Third, with this agreement in place, New Delhi should feel less paranoid about discussing its own nuclear capabilities and their interaction with those of other states. As long as India felt that the United States was trying to strip it of its nuclear weapons program, Indian officials talked on and on about global nuclear disarmament, but they refused to discuss concrete steps that would enhance India's security through cooperative agreements with others.

For example, under the auspices of the new Indo-U.S. Agreement on Science and Technology, the United States should work with India in setting up a center to study best practices gleaned from the American, Russian/Soviet, and the experience of others regarding nuclear and missile technology.

We should also expect that India will eventually join the process of nuclear arms reduction that began with United States and Russian nuclear cuts, and, as other panelists have said, subscribe to the Wassenaar and Australia Group arrangements.

We ourselves do not want to continue down the process of nuclear arms reduction, only to see some of the new nuclear weapons states, such as India and Pakistan, pass us on the way up.

To summarize, while supporting the agreement, I believe that it should be treated as an initial step in the process of crafting a diplomacy that addresses wider arms control and security concerns, not just meeting India's energy needs.

The agreement does much to repair the torn United States-Indian strategic relationship. It is important in reshaping and revitalizing India's massive energy shortfall, and it has already been helpful in our attempt to constrain an Iranian program. But this administration, and its successor, with congressional assistance, should regard it as a beginning, not an end, as far as our nonproliferation and strategic interests are concerned.

Thank you.

[The prepared statement of Dr. Cohen follows:]

PREPARED STATEMENT OF DR. STEPHEN P. COHEN, SENIOR FELLOW, THE BROOKINGS INSTITUTION, WASHINGTON, DC

Mr. Chairman and members of the committee, thank you for the opportunity to share my knowledge of South Asian security, nonproliferation and arms control issues as you grapple with this important initiative. On balance, the initiative should be welcomed. I have argued in print for a nonproliferation halfway house

since 1990—an admittedly imperfect response to an imperfect situation, but far better than the status quo. By minor modifications in the proposed legislation and changes in American policy the nuclear cooperation agreement could be still further improved.

I am a signatory of a March 10 letter backing the initiative. That letter argues that the agreement enhances American strategic interests, and if properly implemented, it will advance, not retard, American nonproliferation objectives. We also argue that the initiative will help India move to an energy strategy that makes it less dependant on imported oil and that it will positively address our global environmental concerns.

I was resident in India during many of the major Indian debates over its nuclear weapons policy. In 1964–65 it debated its response to the Chinese nuclear test at Lop Nor; in 1967–68 it debated whether or not to sign the NPT, and in 1974, after its phony "peaceful nuclear explosion," India debated whether to weaponize. In the late 1980s there was a major debate over the proper response to evidence of a Chinese-assisted Pakistani nuclear weapons program. The Rajiv Gandhi "Action Plan" of 1988 was in part a last-minute attempt to forestall a response-in-kind to Pakistan's program; in the early 1990s Indians grappled with the highly publicized American effort to cap, roll back, and eliminate its nuclear weapons program and that of Pakistan. More recently, I spent a month in New Delhi observing the Indian debate over the Bush-Manmohan Singh initiative.

There are two major conclusions to draw from this 40-year history:

First, in most of these cases India was responding to nuclear developments elsewhere. It's strategic elite was sharply divide as to the utility and morality of nuclear weapons, and until the 1998 tests India's policy was one of maintaining an "option" or a "recessed" (i.e. unannounced) deterrent. As opponents of this agreement have noted, India simply hid its small weapons program and it certainly violated the spirit and the letter of agreements reached with foreign governments concerning the peaceful use of nuclear assistance. For that India has been subjected to 30 years of sanctions.

Second, in all of these debates the military, and purely military calculations, have been notably absent. The Indian nuclear program was nurtured by a small enclave of scientists and bureaucrats who were largely responsive, not pro-active in their thinking. As George Tanham wrote, Indian strategic thought is characterized by its lack of interest in military things. There was (and remains) a curious blend of extravagant idealism (epitomized in the many plans for global nuclear disarmament generated in India over the years) and Kautilyan-Machiavellian realism (epitomized by the secrecy that shrouded the covert weapons program).

It is my judgment that this initiative need not trigger an arms race with Pakistan, and it is certainly not a green light to India to build a thousand or more nuclear weapons. It does provide the United States with an opportunity to work with India to help prevent a broader nuclear arms race, something that is certainly not in the interest of India, Pakistan, China, or America.

Therefore, I would propose the following steps:

First, The agreement with India should eventually be folded into legislation that would develop criteria that would allow other states to enter such a nuclear halfway house. This halfway house would provide civilian nuclear assistance in exchange for impeccable horizontal nonproliferation record. Right now India seems to meet most reasonable tests, as does Israel, but Pakistan and North Korea would not.

Second, the administration should undertake an initiative that would constrain vertical proliferation via a nuclear restraint regime in Asia, this initiative would include India, Pakistan, and China. Such a regime need not involve formal, negotiated limits, which would be very difficult to achieve, but certainly could be based upon a fissile material cutoff, continued restraint on testing, and limited deployment of weapons. The first two feature in the United States-India nuclear initiative, but they need to be made multilateral, especially to ward off an arms race between Pakistan and India. Of course, China's decision on renewing testing will be shaped by its response to the United States, and I believe that we can continue our own ban on tests indefinitely without damaging nuclear preparedness.

Third, with this agreement in place, New Delhi should feel less paranoid about discussing its own nuclear capabilities and their interaction with those of other states. As long as India felt that the United States was trying to strip it of its weapons program, Indian officials talked on endlessly about global nuclear disarmament, but they refused to discuss concrete steps that would enhance India's security through cooperative agreements with others. Indeed, the Indians are still reluctant to allow their country to be the venue for such discussions by nongovernment organizations, unless they are strictly scripted. Under the auspices of the new Indo-U.S. Agreement on Science and Technology the United States should assist India in set-

ting up a center to study "best practices" gleaned from the American and Russian/Soviet nuclear and missile experience, and the experience of other states. We should also expect that India will eventually join the process of nuclear arms reduction that began with United States and Russian nuclear cuts; I am disappointed that such a long-term goal was not even mentioned in the various United States-Indian communiques, we do not want to continue down the road of arms reduction only to see some of the new nuclear weapons states such as India and Pakistan pass us on their way up.

To summarize, while supporting the agreement I believe that it should be the initial step in a process of crafting a diplomacy that addresses wider complex arms control and security concerns, not just meeting India's energy needs. America has such concerns in an area that stretches from Israel to China; this includes at least five states that have nuclear weapons and two that may be trying to acquire them. This agreement does much to repair the torn United States-Indian strategic tie, it is important in reshaping and revitalizing India's massive energy shortfall, and it has already been helpful in our attempt to constrain an Iranian program, but this administration and its successor—with congressional assistance—should regard it as a beginning, not an end as far as our nonproliferation and strategic interests are concerned.

The CHAIRMAN. Well, thank you very much, Dr. Cohen.

Let me just indicate that some of you have discussed other steps that need to be taken, and the sequence of doing this differs. But what assurance do we have, Dr. Einhorn, that if India, China, and Pakistan were to attempt to find agreement that they would not test further, or they would not produce any further fissile material, that all three would agree to that? Is it not equally probable that each of the three, on the basis of its defense situation, maybe against the other two, quite apart from the rest of the world, would want to have the option, in terms of national sovereignty, of remaining out of the picture? In other words, if we're to try to get this agreement before we satisfy our India-United States situation, might that not be a long time coming, or might it ever come? And, in the meanwhile, some have testified that we may not fracture the relationship with India, but we'd certainly set it back. We would not be able to get to the status quo ante. How do you respond to these sequencing situations?

Mr. EINHORN. Mr. Chairman, I think this is a critical line of discussion. The only way we're going to know—find the answer to your question is to test it out diplomatically, to pursue this, make this an important objective of U.S. diplomacy.

China, we believe, stopped producing fissile material some time ago. It hasn't made a commitment that it'll never resume production, but we believe they are not producing. And they're not testing. Nobody is testing today.

Pakistan has proposed, to India, a bilateral strategic restraint regime, one element of which may be a ban on further production of fissile material. I think their proposal is too broad. I don't think it's realistic, as a bilateral measure. But I think one can imagine, if India is genuinely prepared to say, "Enough is enough," and China is also prepared to say, "Enough is enough," in terms of fissile-material production, I think it's reasonable to assume that Pakistan would go along. But I think it would be critical, whether you're talking about a moratorium on nuclear testing or a suspension of fissile-material production, that all three of these governments go along.

I think it's very possible that if the United States were really serious about pushing this, it could be achieved, and it could be achieved in a reasonably short period of time.

The CHAIRMAN. Well, now, to what extent is there an interlocking problem with the Six-Party negotiations in dealing with North Korea now? For example, some have suggested that if the six are not successful in reaching an agreement—namely, the North Koreans continue to pursue a program—that perhaps others, out of self-defense in the area—Japan is often mentioned; South Korea has been mentioned here today—may want to develop programs, in their own defense. Well, we've been at these talks for quite a while. And the President's had, I gather, brief conversations with President Hu Jintao, when he was here. Many people characterize the Chinese as not complacent about the status quo, but, on the other hand, not totally uncomfortable about that situation. But it could be that while everybody is not very uncomfortable, that North Koreans continue to proceed, at which point then it's not just the problem of signing up India and Pakistan and China, but a much broader breakout of the whole situation.

I raise this not to deter the thought that North Korea should stop; that, in essence, China might be more helpful. A lot of people might be more helpful. But, let's say China itself misgauges this, and Japan starts a program. The South Koreans, and perhaps the Chinese, have been quiescent, but they might not remain that way. I get back to the point: Is there enough value, in terms of the relationship situation with India, that has been mentioned before, including the commercial side, that that should not be denigrated? This is a very large agreement, the nuclear being, by far, the most interesting aspect that has generated excitement. But is there enough value in it, in terms of a relationship, leaving aside the nonproliferation situations, to, if we are to err, err on the side of moving toward the acceptance?

Mr. EINHORN. Well——

The CHAIRMAN. Go ahead.

Mr. EINHORN. OK. I think there is value in the strategic relationship. And nobody has disputed that, in either panel. The question is: What is India prepared to do? You know, India has achieved all of its objectives in this negotiation. It can—you know, with this deal, it can buy uranium and nuclear reactors on the world market, it's gained acceptance as a nuclear weapons state in all consequential respects, and it's got freedom of action to produce more plutonium for weapons.

We've had to compromise quite a bit—the United States has had to compromise its principles quite a bit in order to get this deal. I think we are entitled to ask India to compromise a bit, too.

Now, if it really means it when it said it's prepared to work with the United States to work out a treaty to stop producing fissile material for nuclear weapons, we should hold them to that, and we should ask them to accept the same kinds of restraints that the original five nuclear powers have accepted.

On the question of North Korea, we could still pursue a moratorium involving China, Pakistan, India, and the others—United States, United Kingdom, France, and Russia—without reference to North Korea. It need not be a moratorium that would hold for all

time. I mean, obviously, China would be concerned if Japan reacted to the North Korean situation by requiring a nuclear deterrent of its own. And that might affect Chinese strategic calculations. But, for the time being, I think you can separate out the North Korean problem from what you see in southern Asia. And I think you can pursue, and we should pursue, restraints, both in nuclear testing and fissile-material production.

The CHAIRMAN. Dr. Milhollin, why would Dr. ElBaradei, in the IAEA, be supportive of this arrangement? You know, essentially, they are, apparently. But is this a surprise to you, or does it make any difference, one way or another?

Dr. MILHOLLIN. Well, I think to evaluate his position you have to look at the posture of his agency. If somebody in the world offers to put additional reactors under inspection, he's not going to stand up and say, "No, I don't want to inspect those reactors unless you let me inspect all of your reactors." That's not part of his mandate. His agency is there to serve, when asked to serve. And so, in this case they're being asked to inspect additional reactors. Now, that's really the only role that he properly has.

I must say that it's not really an appropriate question to ask his agency—that is, whether, from a political, diplomatic, strategic perspective, he approves or disapproves of this arrangement. It's not really part of his portfolio. His portfolio is to do inspections for reactors that countries agree to put under inspection. And I think if you just look at it that way, his answer has to be, "Yes," that—"Yes, of course, we'll inspect them."

The CHAIRMAN. Leaving aside his vocational interest in inspecting, what about, say, countries, like France or Germany or England? Why would they be in favor of this new arrangement with the United States and India?

Dr. MILHOLLIN. Well, you have to look at it after the United States has made its declaration. That is, if the United States declares, "Yes, we're going to trade with India. We're going to get into the reactor market," it's pretty hard to imagine that the French or the Russians are going to say, "Well, gee, we're not interested." We've always been the king, in terms of nonproliferation, in the world. We've set the standard. And so, nobody's going to be more royalist than us. Once we decide that we're going to trade with somebody, everybody else has to jump in. They have industries. They don't want to lose markets. It's just a natural aspect of capitalism.

The CHAIRMAN. Well, it sounds like a rather anarchic situation—

[Laughter.]

The CHAIRMAN [continuing]. Almost a growth industry created by people wanting to furnish all this.

Dr. MILHOLLIN. So far, there's been restraint, because there has been an international agreement to restrain. But once somebody breaks that agreement, then it's a free-for-all, as you very correctly point out.

The CHAIRMAN. Secretary Lehman, even if all these countries suddenly want to supply India, India apparently has taken the position that they don't want to sign an absolute restraint of their activities. On the other hand, as many have pointed out, they have had reasonably good behavior in the regime for several years, and

there would not appear to be particularly good reasons why they would want to accelerate their activities. But let's say that there was an inclination of a few people in India—after all, this is a controversial issue in India, not just with parliamentarians, but with people who are nuclear experts and maybe have a vested interest in this—if we have this new relationship with India—and maybe it's been overstated, but, nevertheless, the United States and India really have a rapport now, which is considerable, on many fronts—is there not greater possibility that we will have some influence—by that, I mean the United States, quite apart from the nonproliferation regime—in terms of plans about India? Or do you feel that, essentially, as has been suggested, India got all that it wanted from this situation, sort of, freestyle from here on, and they're delighted that we're moving along with them, that there's not really a sense here of cooperation or restraint?

Dr. LEHMAN. Mr. Chairman, let me consider several cases. The case in which we—the administration had not negotiated this new approach that involves civil nuclear cooperation, many of the strategic partnership elements would probably have proceeded anyway. Much of the business would be unconstrained. Some of the strategic interests are so common and so clear that those would have proceeded.

On the other hand, the negotiation has taken place. There is an agreement to proceed on a certain path. If this breaks down, I think we will have a period in which things that would have receded anyway will be delayed, disrupted, distorted in the near term, but, in the long run, eventually they'll start to reemerge.

But that's—neither of those is the case. Where we are now is that there is an agreement. And the question, then, is: How do we shape that and optimize it, and, as I've said, and include nonproliferation as a central element of that goal?

I think that civil nuclear cooperation is important, because it permits us, then, to have a much closer relationship in dealing with the implementation details that are very important.

So, for example, let's take one that's very important to everybody at this table and the previous panel, the fissile-material cutoff. India has long said it favors it. It's one of the godfathers of the program. It's been in practically every one of their public declarations for many, many years. They even cosponsored a U.N. resolution with the previous administration in support of it. Why doesn't it happen? Well, the answer is that the domestic politics and the regional situation involving India have really not given—not created the conditions where they were really prepared to go ahead. I think now if we engage with them on this, we have an opportunity to shape those conditions.

Now, I have to tell you that it is wonderful that India is this great democracy that everybody is talking about, but it does have its downsides. And one of the downsides is that partisan politics gets awfully nasty. And often, positions are defined by parties as, "Whatever my opponent is for, I must have to be against." That being the case, we have to be a bit sophisticated in how we proceed. It's—I don't want to quite say that if the United States says India ought to do something, that India will automatically do the oppo-

site, but I think you have to take into account the domestic politics and how we move ahead.

But Indians have said, for many years, they support an FMCT. Many Indians have said they've got enough. China says it's got enough. Do the Pakistanis have enough? Maybe now is the time.

The CHAIRMAN. Well, gentlemen, I thank you very, very much.

Sadly, another vote has intruded. This one is a 10-minute vote, and we're halfway into it. But you have been very patient, and given us well over 3 hours of remarkable service.

And I thank you for your testimony and your preparation for this and your responses. And we look forward to staying closely in touch with all of you.

Thank you very much, and this hearing is adjourned.

[Whereupon, at 12:42 p.m., the hearing was adjourned.]

ADDITIONAL QUESTIONS AND ANSWERS SUBMITTED FOR THE RECORD

[Note.—Senator Joseph Biden submitted 15 questions to the witnesses. Questions 1–13 were addressed to all the witnesses, each of whom was invited to answer only the questions he wished to answer. Question 14 was addressed only to Secretary Perry, Ambassador Gallucci, Dr. Carter, and Dr. Einhorn. Question 15 was to Dr. Cohen. If their testimony already answered a question, there was no need to repeat it.]

RESPONSES OF GARY MILHOLLIN TO QUESTIONS SUBMITTED BY SENATOR BIDEN

Questions 1 and 2. Are we right, or are we wrong, to seek a new status for India with respect to the Nuclear Non-Proliferation Treaty? If we are right, then should we treat India as a nuclear weapons state under the treaty, as a nonnuclear weapons state, or as something in between? If the answer is something in between, then what should that be? What standards should we set for India, and what rewards should be provided for India's meeting those standards?

Answer. India is officially a nonnuclear weapon state under the Nuclear Non-proliferation Treaty, which defines such a state as one that has not "manufactured and exploded a nuclear weapon or other nuclear explosive device prior to 1 January 1967." Thus, India's status cannot be changed without amending the treaty. The United States, as a member of the treaty, is obliged to recognize the definition, and to treat India in a manner in accordance with the treaty—that is, as a nonnuclear weapon state.

Under the administration's plan, India would be treated better than both nuclear weapon states and nonnuclear weapon states. Nuclear weapon states are forbidden under the treaty (article 1) to assist any nonnuclear weapon state to acquire a nuclear weapon. This is a treaty obligation that India does not have. Also, nuclear weapon states have stopped producing fissile material for nuclear weapons, something that India will not be required to do and does not intend to do. Thus, India will be treated better than any nuclear weapon state under the administration's plan.

Nonnuclear weapon states under the treaty are required to forswear nuclear weapons, something India has not done and does not intend to do, and nonnuclear weapon states are obliged under the treaty to accept "full-scope" inspections that India does not accept and does not intend to accept. Also, both nuclear weapon and nonnuclear weapon states are obliged under article 3 of the treaty to restrict their nuclear exports, an obligation that does not apply to India because India is not a treaty member. Thus, India will also be treated better than any nonnuclear weapon state.

It follows from the two points above that under the administration's plan, the United States will, in nuclear matters, treat India better than any other country in the world. This treatment is not justified by India's promise to put a portion of its nuclear reactors under inspection. The portion exempted from inspection will produce more plutonium than India will ever need for nuclear weapons. Thus, India's promise regarding inspections is illusory. Nor is the favorable U.S. treatment of India justified by India's promise to refrain from testing nuclear weapons. This promise is not made under any treaty obligation; it is only voluntary and not binding. Nor is the favorable treatment justified by India's steps to establish export con-

trols, which are still new in India and untested. India has consistently tried to evade export controls when they have been applied by other countries, including the United States.

Question 3. How great is the risk that the administration's nuclear deal with India will indirectly help India's nuclear weapons program, by relieving India of the need to choose between guns and butter in its use of its domestic uranium resources; lead other countries to decide that they, too, can develop nuclear weapons and endure the world's reaction, because it will be only temporary; produce increased instability in South Asia, due either to India's increased plutonium production or to its greater capability for plutonium production, even if it does not make use of that capability; lead other nuclear suppliers to trade with their clients that have nuclear weapons; or lead the rest of the world to reject nonproliferation measures that require any economic sacrifice, because they view nonproliferation as embodying too great a double standard?

Answer. This question is answered in my testimony, which describes the risks to worldwide export controls and nonproliferation efforts that the administration's plan would produce.

Question 4. How can we maximize such benefits of the nuclear deal as increased energy for India, produced in an economically rational manner; limiting India's increased demands in world oil and gas markets; and India's transition from an aggrieved nonaligned state to a stakeholder in the international system and in the world's nonproliferation regimes?

Answer. The proposed nuclear deal will not increase India's energy output to any significant extent. The reason is that nuclear power supplies only about 2 percent of India's electricity, which in turn is but a small fraction of India's overall energy consumption. Even if India's nuclear power output could be increased by 50 percent (which seems unlikely) such a step would only increase India's overall electricity output by 1 percent at most, and would only increase India's overall energy output by a fraction of 1 percent. That is not a significant increase in the energy available to India, and thus would not reduce India's demand for oil and gas.

India is not an aggrieved state. India decided to pursue nuclear weapons with full knowledge of the cost such a decision would have on its diplomatic standing. India's calculation was that nuclear weapons would increase its prestige in the world more than it would lower it. India has been content to live with that decision; so should we.

Question 5. There is some uncertainty as to what India will actually do under the nuclear agreement. Should Congress hedge against unexpected Indian behavior? For example, should we require annual reports on how the deal is going? Should the deal end if India tests a nuclear device, or diverts nuclear technology to its weapons program, or violates or ends its safeguards agreements, or proliferates to another country? Should Congress revisit the agreement every 5 years, to see whether it is still in our national interest?

Answer. The best, and, in fact, the only way for Congress to learn the details of what India will actually do, or promise to do, under the proposed nuclear deal is to wait until an agreement for nuclear cooperation is made. Once an agreement is presented for consideration, Congress can add any conditions to the agreement that seem warranted. Congress has never approved an agreement for cooperation without seeing the actual agreement. There is no reason to start doing so now.

Question 6. If we go ahead with the India nuclear deal, we will want to assure a level playing field for U.S. industry. Should we require that any changes in Nuclear Suppliers Group guidelines conform to the nonproliferation standards that we establish for the United States? Should we require that NSG guideline changes not enter into effect until our peaceful nuclear cooperation agreement with India enters into effect, so that firms in other countries don't get to sell things months before our firms do?

Answer. Other suppliers have already reacted to the administration's plan. Russia has just sold fissile material to India's Tarapur reactors without notifying the NSG. Russia dared to do so only because the United States-India deal had been announced.

The problem of undercutting by other suppliers could have been avoided if the administration had followed the procedures laid out by existing U.S. law. Consistent with those procedures, the administration could have informed other suppliers that the United States would take no action until an agreement for cooperation with India had been negotiated, until it had been approved by Congress, and until it had been blessed by the NSG. That way, the line would be held in the NSG until Amer-

ican companies were authorized to compete. By trying to short circuit the process, the administration has made it more likely that American companies will be outmaneuvered by foreign competition.

Neither Congress nor the administration can require unilaterally that NSG guidelines conform to changes in U.S. nonproliferation standards. The only way to reduce the risk of American companies being caught short is to follow the procedures prescribed by existing law, as stated above. This can still be done by informing the other NSG members that no change in U.S. export control behavior will occur until an agreement for cooperation is made with India, until Congress approves such an agreement, and until the NSG, itself, decides to change its guidelines to conform to the agreement. This approach has the best chance of holding the line in the NSG until American companies are free to sell.

Question 7. Should we require that the administration obtain any changes in NSG guidelines through the regular process, which requires consensus?

Answer. Yes. If the United States changes its export policy without the consent of the NSG, there will be grave harm to worldwide export controls. This harm would far exceed any benefit from the deal with India. In fact, if the administration implements the India deal without consensus in the NSG, the regime would suffer a loss in credibility from which it probably could not recover.

Questions 8 and 9. India is willing to cap its fissile material production in an international treaty, but not unilaterally. Many people believe that the United States is the party that is holding up progress on a Fissile Material Cut-off Treaty, by refusing to accept the existing mandate in the Conference on Disarmament to negotiate a treaty with verification provisions. Should Congress require that FMCT negotiations begin, under a Conference of Disarmament mandate, before the President can waive the law for India?

Several witnesses suggested that a moratorium on fissile material production for nuclear weapons purposes, either regional or also including the five recognized nuclear weapons states, might be a feasible objective. One witness added that in the context of the United States-India nuclear deal, India should be more open to transparency about its nuclear objectives and should look ahead to eventual nuclear arms reduction. Should Congress require that the executive branch pursue these initiatives and report regularly on its progress?

Answer. India's statement that it would be willing to cap its fissile material production is similar to its statement, reiterated numerous times, that it would be willing to give up nuclear weapons if everyone else did so. India knows very well that a fissile material cut-off treaty is not much more likely to happen than everyone giving up nuclear weapons. Thus, its offer to cap production as part of such a treaty should be considered as rhetorical.

If India were serious about capping its fissile material production it could do so unilaterally, as all five nuclear weapon states under the NPT have done. Nothing stops India from doing so tomorrow. This would seem a reasonable step for a country that desires to be treated as a nuclear weapon state, that considers itself to be a nuclear weapon state, and that claims only to want enough nuclear weapons for a minimal deterrent. India already has enough weapons for such a deterrent against China, which has capped its fissile material production, and against Pakistan, which would probably cap its fissile material production if India did so. Thus, there is no reason for India not to agree to such a cap now, unless India has nuclear ambitions that transcend its region.

Questions 10 and 11. Should Congress limit the scope of U.S. nuclear fuel assurances to India, so as to maintain U.S. ability to impose effective nonproliferation sanctions or to abide by sanctions that the U.N. Security Council might impose someday?

Has India really accepted safeguards in perpetuity, or will "India-specific safeguards" turn out to be something less? Should Congress require that safeguards really be in perpetuity, e.g., that India not be allowed to suspend safeguards if there is an interruption in nuclear fuel supplies? Should Congress require that safeguards apply to a reactor's fuel or spent fuel after its removal from the reactor, and not just to the reactor itself?

Answer. These two questions concern the rights the United States should reserve in any agreement for cooperation with India. Fortunately, an excellent enumeration of such rights is already contained in the Atomic Energy Act, which presents criteria for nuclear cooperation that were carefully thought out by the experts who drafted that law. Those criteria contain the rights, including those specific to fuel supply and international inspections, the United States should insist upon in any new agreement with India.

As stated above, the best way for Congress to insure that the agreement guarantees essential U.S. rights is to withhold approval until Congress can see the agreement that is actually negotiated. There are numerous issues of great importance, including the ones the questions mention, that cannot all be foreseen at this time. It is prudent for Congress to reserve judgement until it can actually see whether there are gaps in the actual agreement.

Question 12. India has said that it accepts the responsibilities of a state with an advanced nuclear program. Should Congress require that India bind itself to the responsibilities contained in article I of the Nuclear Non-Proliferation Treaty, not to help other states to get nuclear weapons?

Answer. Yes. If India is negotiating in good faith, it should be willing to accept such an obligation.

Question 13. India's nuclear separation plan is to be phased in over an 8-year period. Should the world's nuclear trade with India be phased in, as well? If so, how? Should there be no sales involving a given facility until safeguards have entered into effect, or until India has provided the plans for a new facility to the IAEA?

Answer. Article 3 of the Nuclear Non-proliferation Treaty forbids the sale of "source or special fissionable material," or items "especially designed and prepared" for producing special fissionable material to a nonnuclear weapon state such as India unless the sale triggers international inspection. Thus, no sale by a treaty member of such "trigger list" items to an uninspected facility in India can take place without breaching the treaty.

Dual-use items are not subject to such a restriction, however, so once a green light is given to nuclear cooperation, a flood of previously controlled dual-use items is likely to go to India at once, regardless of the separation schedule for the reactors.

At India's present stage of development, dual-use items could be of greater help in making nuclear weapons than will be additional fissionable material or additional reactors. Dual-use equipment is what one needs to miniaturize nuclear warheads to fit on longer range missiles, and to make the missiles themselves more accurate and powerful. India is now trying to do both, and will profit enormously in weapon development from being able to buy such equipment—for the first time—without restriction.

RESPONSE OF HON. ROBERT GALLUCCI TO QUESTION SUBMITTED BY SENATOR BIDEN

Question 14. You have worked on real-world nonproliferation cases, and you have dealt with the need for other countries to support us on those cases. Should we worry that the India nuclear deal will undermine that support on an issue like whether to sanction Iran? How much weight should we give to European editorials that criticize our so-called "double standard" on India and Iran, or to recent reports that officials in Southeast Asian countries are talking in similar terms.

Answer.

18 MAY 2006.

Hon. JOSEPH R. BIDEN, Jr.,
Chairman, Committee on Foreign Relations,
U.S. Senate, Washington, DC.

DEAR SENATOR BIDEN: Thank you for giving me the opportunity to expand on my testimony before the Senator Foreign Relations Committee on 25 April 2006 by providing the questions contained in your memorandum of 2 May 2006.

Some of the questions I had already tried to address in my testimony, and many of the others, I think, were or would be better addressed by others. However, in a general way, I do want to comment on a couple of themes that run through the questions, and then specifically respond to Question 14, which you address to four of us by name.

The first theme has to do with the status of India and the Nuclear Non-Proliferation Treaty.

I think it would be dangerous to ever change the basic understanding that has been universally accepted in the international community: There are only five legitimate nuclear weapons states. If Israel, India, and Pakistan (and perhaps North Korea) have nuclear weapons, they may not be in violation of the NPT, but they do not have the standing in the international community that make them eligible for nuclear cooperation, they have unsafeguarded nuclear facilities and they are not legitimate nuclear weapons states. To discard that standard is to open the door to the slow, steady spread of nuclear weapons around the world.

All the talk about recognizing that the world has changed, and that the NPT has been overtaken by events in the 21st century is, in my view, dangerous nonsense that does not stand up to analysis. This administration and the U.S. Congress, are on the verge of trashing an international norm that is, at least, partly responsible for preserving a world with only a few nuclear weapons states, when we could and will have dozens more if we are not careful.

In my testimony, I advocated undercutting the norm against nuclear cooperation with a state such as India only if New Delhi accepted a verified freeze on its fissile material production for weapons, abandoned nuclear explosive testing and agreed to the highest standards in its export policies. This would still be short of the full-scope safeguards standards and thus departs from that critical norm we have worked so hard to have accepted. However, I think it could be a justified move because of the material benefits, in the form of verified restraint on India's nuclear weapons program, that would result. To make that move for anything less will be correctly seen as a cynical, short-term calculation by the United States to improve its bilateral relations with India.

A second theme is the additional provision and requirements that may be added to the argument with India, from New Delhi's position on the FMCT to its commitment to forego further nuclear explosive testing. In general, I would favor all substantive provisions that would tend to limit India's nuclear weapons development program and bind India to the various elements of the nonproliferation regime. It is not clear to me that any truly substantive amendment of the deal as described would be acceptable to India, but that, in my view, only suggests that the deal should not stand as negotiated.

Finally, on Question 14, there is the issue of the cost in credibility and effectiveness that the United States will pay with other countries on other nuclear proliferation related issues, if it makes this deal with India. I do not think that there is any question that we will confront the charge of double standard or, more generally, that the United States has abandoned the NPT and the international regime that surrounds it for a unilateralist approach to proliferation, consistent with its attitude on other issues of international security. In real political terms, this will likely make it harder for the United States to lead the international community in efforts to deal with Iran and North Korea, and certainly handicap us if, as predicted, we find new countries in Asia, the Middle East, or even Latin America moving to develop a nuclear weapons option.

Sincerely,

Ambassador ROBERT L. GALLUCCI,
Dean, Edmund A. Walsh School of Foreign Service.

RESPONSES OF STEPHEN P. COHEN TO QUESTIONS SUBMITTED BY SENATOR BIDEN

Question 1. Are we right or wrong to seek a new status for India with respect to the NPT?

Answer. We are right to do so, and India should be treated as a nuclear weapons state (NWS). An analogy is the recent bill for amnesty and the regularization of illegal immigrants: India has had to wait; it will have to demonstrate that it will be a responsible NWS; and it will receive no special advantage, but its fundamental status will change. I don't think the administration has thought this out carefully, as it still insists that India will not be a "nuclear weapons state" under the treaty.

Question 2. What standards should India meet?

Answer. The test should not be the safeguarding of reactors (India will have more reactors under safeguard than all the NWS combined); that really is an irrelevant issue. We should be more concerned about India's behavior in terms of cooperation on nonproliferation (membership and adherence to various regimes), and its restraint in terms of developing a nuclear arsenal in such a way that it does not trigger an arms race with its neighbors.

Question 3. What is the risk that the "deal" will indirectly help the Indian military nuclear program, suggest to other countries that they, too, can develop nuclear weapons, and increase instability in South Asia?

Answer. There obviously is some risk, but as I noted in my testimony India is unlikely to build a very big arsenal (its nuclear policy has been entirely reactive, not based upon some master plan to become a major NWS). The incentives of other states will be region and situation specific. India has provided the rhetoric to justify other states wanting to become NWS (especially for Iran and North Korea), but their circumstances drive them toward nuclear weapons quite independently of the

Indian example; the South Asian case can be met by active diplomacy that would urge all states to do what is in their interest anyway—void an open-ended nuclear arms race. Here India should be encouraged to take the lead as a "responsible" new NWS.

Question 4. How can we maximize energy and economic benefits of the deal while encouraging India's transition to a stakeholder in the international system and global nonproliferation regimes?

Answer. It is in India's economic interest to be seen as a responsible global stakeholder; this will shape, on the margins, the willingness of many important companies to invest in India (its democratic politics and internationally moderate positions are part of its comparative advantage vis-a-vis China for many investors). The United States should continue to stress the importance of India's membership in such regimes, and link this to the argument that a globally engaged and responsible India is a good place to put American investments. These investments could include civilian nuclear technology; while the French and Russians may be less concerned about such matters; Japan certainly is, and there are plans for Japanese investment in the Indian civilian nuclear industry.

Question 5. There is uncertainty about what India will actually do if the deal is consummated. What should Congress do to ensure compliance?

Answer. I'd concur with the suggestion that regular reports be generated by the executive branch. These could provide information regarding Indian compliance. India, of course, may do its own reports, measuring American compliance. There is bound to be slippage and disagreement on both sides, Congress cannot negotiate these, but it certainly can seek reassurance that the overall framework is intact. As for testing, there may be circumstances when we would want to overlook Indian tests (perhaps following Chinese or Pakistani tests, or American ones), but at that point the least of our worries will be a small and still unproven Indian nuclear arsenal. Our arms control and strategic diplomacy should ensure that we do not reach a point where major (and minor) states regard nuclear testing as in their interest.

Question 9. Should Congress request that the executive branch pursue a FMCT moratorium on a regional or five-NWS basis, and report regularly on its progress.

Answer. Yes, this would be desirable, and I hope that there will be a more accommodating executive branch on such initiatives in the next few years.

Question 10. Should Congress limit the scope of U.S. nuclear fuel assurances to India, or abide by UNSC sanctions that might some day be imposed?

Answer. Definitely not. I don't expect India to violate the agreement—there are many ways in which compliance can be assured through normal diplomacy. A UNSC sanction could only flow from some catastrophic event (an India-Pakistan nuclear war?), fuel supplies, in such a case, would be the least of our concerns; we cannot prejudge who will be right and who will wrong.

Question 11. Should Congress require that safeguards be in perpetuity and should Congress bind India to article I of the NPT, (not to help other states get nuclear weapons?)

Answer. Both of these are reasonable requests, and as I read the two communiques and Indian public statements, it appears that India has agreed to them. Certainly, adherence to article I, in spirit, is essential. More broadly, it is our responsibility, as a great power, to pursue diplomacy which will ensure that a situation in which India might be tempted to assist another state to go nuclear never arises.

Question 12. Should Congress require that India bind itself to the responsibilities of article I?

Answer. This, and the policy suggested in Question 11, are unobjectionable, but largely are "feel good" amendments. In my judgment, India has already made such commitments; it should have no trouble in reiterating them publicly, but I doubt whether the Indian Government will want to, itself, report back to Congress. Indian compliance with its own pledges and promises might best be monitored by the executive branch, which can periodically report to Congress.

Question 13. India's plan to separate military and civilian facilities will be phased in over an 8-year period; should civilian nuclear assistance also be phased in, and should there be no sales until India has provided plans for a new facility to the IAEA?

Answer. On both questions, yes. It will take at least 5 years to build a nuclear plant in any case, and I see no reason why sales should not wait until the IAEA approves the plan for a new facility.

Question 15. Based on your contacts with the Indian nuclear and strategic community, would you still favor this deal if you did not have confidence that India is unlikely to exercise its "maximum rights" to increase its production of fissile material?

Answer. I would not favor the deal if I believed that India sought to become a "major" nuclear power, i.e., develop forces larger than those of, say, China, and were it to build a nuclear delivery system that would enable it to strike targets in Europe or America. At the moment, the Indian strategic and nuclear communities would not favor such a capability, but I would be alarmed if circumstances were to lead to such a policy. My confidence in the modesty of Indian plans rests upon some assumptions about India as a state (democratic, secular, globally interconnected culturally and economically, and not eager to enter into an arms race with major strategic rivals). A very different India cannot be ruled out entirely (after all, India was under authoritarian rule for 18 months during the period of the Emergency under Mrs. Gandhi), but I would regard such an India as very unlikely for the foreseeable future. Hence, my conclusion that our recognition of India as a NWS, and support for its civilian nuclear progam, if coupled with a renewed arms control diplomacy, will be to our advantage, especially if we can persuade India to become a partner in such diplomacy. The deal makes such a partnership possible, although it does not ensure it.

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