

NIAS

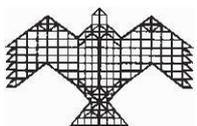
September 2006
R2 - 06

NIAS Report

Assessing the Indo-US Deal on Civil Nuclear Cooperation

Forging a New Partnership

Sonika Gupta
Arvind Kumar
S. Chandrashekar



International Strategic and Security Studies Programme
NATIONAL INSTITUTE OF ADVANCED STUDIES

Bangalore, India

Assessing the Indo-US Deal on Civil Nuclear Cooperation

Objective of the Study

The Indo-US nuclear deal has generated a heated debate in India. The political establishment is divided, many in the scientific community seem to think that the deal will erode India's strategic autonomy and a number of strategic analysts seem to feel that the deal will be inimical to India's long term strategic interests. The rhetoric behind the debate does raise certain fundamental issues about the costs and benefits of this major bilateral initiative. The debate so far has been characterized more by ideological posturing rather than by an objective assessment of the pros and cons of the deal.

The United States India Nuclear Cooperation Promotion Act passed on 26 July 2006 in the US House of Representatives has raised several questions.¹ Many questions have also been raised on the discrepancies between the Act passed by the House and the bill introduced in the US Senate². According to the legislative process in the US, the two bills must be reconciled into a single consensus document before it is sent to the President for his consent.

There seem to be conflicting interpretations of the Joint Statement both in India and the US as reflected in the Act and the Prime Minister's speech to Parliament on 17 August 2006.³ Many in India have commented that the Act passed by the House of Representatives has altered the goal posts agreed to in the Joint Statement by Prime Minister Manmohan Singh and President George W. Bush.

How valid are these concerns? Do the promises implicit in the Joint Statement truly reflect US intentions and will they be translated into actions? Can the US be trusted on matters that are crucial for India's security such as nuclear weapons and energy? How valid are the fears that the deal would erode India's independence of action in world affairs? These are all genuine worries and need to be addressed.

This paper will evaluate the progress on the deal using the July 18, 2005 Joint Statement between Prime Minister Manmohan Singh and President George Bush as the baseline. As the bill introduced in the Senate remains to be passed, this study will only analyse the Act passed on July 26, 2006 by the US House of Representatives.

We shall trace the related developments since July 18, 2005 to assess whether both countries have adhered to the underlying parameters agreed upon in the Joint Statement. In so doing we shall also address the various concerns raised by critics of the deal and try to see how these could affect the approaches of the two sides towards the deal. While it is still too early to comment on the outcome with any certainty we will try to prioritise the various issues and concerns in terms of their impact on the ongoing negotiations between India and the US. Can India and the US indeed finalise a suitable arrangement that is satisfactory to both sides?

¹ The Full Text of the United States India Nuclear Cooperation Promotion Act is available at the Library of Congress site <http://thomas.loc.gov/cgi-bin/query/D?c109:3:./temp/~c109nqU4In::>

² The Full Text of the Senate Bill (United States India Peaceful Cooperation Atomic Energy Cooperation Act) is available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_bills&docid=f:s3709pcs.txt.pdf

³ Full Text of the Prime Minister's Speech in Rajya Sabha on 17 August 2006 is available at http://164.100.24.167/rsdebate/deb_ndx/208/17082006/8to9.htm

Background to the Deal

Relations between India and the US in the nuclear area have largely been based on suspicion and mutual distrust after Pokhran I resulting in India's isolation from the global civil nuclear energy cooperation regime. Even though by Pokhran II, the world order had changed with the end of the Cold War and the demise of the Soviet Union, this distrust of India continued. In the aftermath of the September 11th event in 2001, there was a change in the US attitude towards India. The proposed nuclear deal with the US is the culmination and result of a process of mutual understanding set in motion in the aftermath of Pokhran II. Mutual appreciation of each other's energy and security needs in the changing international scenario was an integral part of this process. Civil nuclear cooperation was identified as one of the key areas of possible cooperation in the Next Steps in Strategic Partnership (NSSP) between India and the US.⁴ The process to end India's isolation from global nuclear trade regimes is now underway.

India's isolation in the nuclear arena for the last three decades resulted in a self-reliant and original programme tailor made for meeting Indian requirements of nuclear power based on domestic availability of nuclear fuel. India has also pioneered many innovative approaches to technology development resulting in a situation where it is a world leader in some areas. However, India's nuclear power programme has not been able to grow at a pace required to meet the country's growing needs for power. It is well known that if a developing country's GDP has to grow at six to seven per cent, the power requirements will have to grow at about ten to twelve per cent on an annual basis. Nuclear power should

contribute significantly to this demand for power. Further, pollution and global warming considerations may also dictate a greater shift towards nuclear energy in the power mix of the country. This evaluation of the deal will take into account all these factors in the assessment of the advantages and disadvantages for India.

Indo-US Civil Nuclear Cooperation – Intentions as reflected in the Joint Statement

The US position on the civil nuclear agreement as reflected in the Joint Statement is as follows.

“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 would 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

Civil nuclear cooperation was identified as one of the key areas of possible cooperation in the Next Steps in Strategic Partnership (NSSP) between India and the US.

⁴ Indian Prime Minister Atal Behari Vajpayee statement on, “Next Steps in Strategic Partnership with USA”, Statement by Prime Minister Shri Atal Behari Vajpayee, 13 January 2004 available at <http://meaindia.nic.in/sshome.htm>

United States will consult with the other participants in the Generation IV International Forum with a view toward India's inclusion."⁵

It is clear from the first sentence of President Bush's statement that in view of India's non-proliferation credentials, the US regards India as a responsible state. It also recognizes India as a responsible state with advanced nuclear technology and it should therefore be treated on par with other states that are like India.

In the second sentence the US President makes it clear that the US is interested in working with India to achieve full civil nuclear energy cooperation to meet India's growing energy requirements and for achieving energy security.

In the next sentence President Bush talks of three things.

- Seeking agreement from the Congress to amend US laws and policies to enable full civil nuclear energy cooperation and trade with India;
- Working with friends and allies to enable full civil nuclear energy cooperation and trade with India; and
- To include expeditious fuel supplies to safeguarded nuclear reactors at Tarapur as a part of this arrangement.

The President then mentions that the US will encourage its partners to consider the request for fuel supplies to Tarapur expeditiously.

The fifth and sixth sentences talk about India's interest in participating in the ITER and the US intention of helping India to become a member of the ITER.

The last sentence of President Bush's statement talks about the Generation IV International Forum and US intentions of consulting with its partners to include India as a part of this forum.

India has made the following statement with regard to Indo-US civil nuclear cooperation:

"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."⁶

In the first sentence Prime Minister Manmohan Singh mentions that India would reciprocally agree that it

⁵ The Full Text of the Indo-US Joint Statement of 18 July 2005 is available at <http://meaindia.nic.in/speech/2005/07/18js01.htm>

⁶ Ibid.

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.

Next he goes on to elaborate what these responsibilities and practices are.

- Identifying and separating civilian and military nuclear facilities and programs in a phased manner;
- 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.”⁷

The US President had committed to amending relevant US laws, and NSG guidelines to enable Indo-US civil nuclear cooperation.

- This process has started in the US with the amendment of the US Atomic Energy Act of 1954 and the passage of United States India Nuclear Cooperation Promotion Act in the House of Representatives on July 26, 2006.
- The US has also requested its NSG partners to initiate discussions with India on amending their guidelines. At a plenary meeting in Brasilia on 1-2 June, 2006, the NSG members discussed “the possible NSG-India relationship regarding civilian nuclear cooperation”.⁸ This process will be continued at the next regular NSG Consultative Group meeting.
- India has already become a full member of the ITER.

On its part, pursuant to the Joint Statement:

- India has provided a Separation plan demarcating its military and civilian facilities.⁹
- Based on US initiatives, it has entered into discussion with the IAEA on the details on an India-specific Additional Protocol. It has also been in touch with NSG members.
- India remains committed to its unilateral moratorium on testing, and negotiating an FMCT in the Conference on Disarmament in Geneva.
- India has already harmonized its export control laws in accordance with the MTCR and NSG guideline by passing the WMD Act in June 2005.¹⁰

Progress on the Ground

The US President had committed to amending relevant US laws, and NSG guidelines to enable Indo-US civil nuclear cooperation.

Concerns raised in India by the United States India Nuclear Cooperation Promotion Act, 2006

There are many concerns raised by the members of

⁷ Ibid.

⁸ See NSG Press Release available at <http://www.nuclearsuppliersgroup.org/PRESS/2006-07-Brasilia.pdf>

⁹ Full Text of the Separation Plan is available at http://www.dae.gov.in/press_sepplan.pdf#search=%22Joint%20Statement%20%2B%2018%20July%202005%22

¹⁰ Weapons of Mass Destruction and their Delivery Systems (Prohibition of Unlawful Activities) Act, 2005. Full Text available at <http://meaindia.nic.in/>

academia and scientific community in India with regard to the form and content of the United States India Nuclear Cooperation Promotion Act passed in the US House of Representatives on 26 July 2006. These concerns are addressed below.

Does the deal make India a Nuclear Weapon State?

Many political leaders and strategic analysts in India have criticized the deal for not conferring the status of a Nuclear Weapon State on India as a part of the Indo-US deal.¹¹ Is conferring of a Nuclear Weapon State status on India a part of the deal as envisioned in the Joint Statement?

The term Nuclear Weapon State has a very specific meaning in the international legal regime.¹² As per the NPT only those countries that exploded a nuclear device prior to January 1, 1967 qualify as Nuclear Weapon States. Nowhere in the Joint Statement or in the House of Representatives Act has India been referred to as a Nuclear Weapon State. In the light of this, how do we interpret President Bush identifying India as “a responsible state with advanced nuclear technology” to be treated on par “with other such states”?

The US President has clearly not identified India as a Nuclear Weapon State or as a Non-nuclear Weapon State. He has *de facto* put India into a third category of states that are “responsible states with advanced nuclear technology”.

This categorization raises two important issues with regard to the Indian nuclear program. The first relates to the legitimacy of India’s possession of nuclear weapons. The second relates to the nature and scope of any safeguards agreement that may be required for international civil nuclear cooperation. The Prime Minister has also clarified in Parliament that:

“The July Statement did not refer to India as a Nuclear Weapon State because that has a particular connotation. Since the NPT could not be amended we could not claim that we will get the formal status of the Nuclear Weapon States. But the July Statement explicitly recognizes the existence of India’s military nuclear facilities. It also meant that India would not attract fullscope safeguards such as those applied to Non-Nuclear Weapon States that are signatories to the NPT and there would be no curbs on continuation of India’s nuclear weapons related activities.”¹³

The House of Representatives Act provides details of how the US Atomic Energy Act of 1954, would be amended to take care of civil nuclear cooperation with India. From the amendments to the Act, it would appear that the US does recognize India as a *de facto* but not a *de jure* Nuclear Weapon State.¹⁴

Will the deal have an adverse impact on India’s development of nuclear weapons and delivery systems?

In the context of the Indo-US deal, strategic autonomy refers to independence of India’s decision making

¹¹ See for example, Arun Shourie, “Parity, did you say?” *The Indian Express*, 23 August 2006, Yashwant Sinha, “The Questions PM Did Not Answer” *The Asian Age*, 21 August 2006 and K C Pant, “Time for Parliament to Step In” *The Hindu*, 25 July 2006.

¹² For an analysis of the legal implications of amending the NPT to include India as a Nuclear Weapon State see Abu Mathen, “Playing the Nuclear End Game”, *NIAS Working Paper*, (forthcoming)

¹³ PM’s Speech in Rajya Sabha on 17th August 2006. n.3

¹⁴ While in a strict legal sense India may not qualify as a Nuclear Weapon State, for all practical purposes India is a nuclear weapon state after Pokhran II. The term “responsible state with advanced nuclear technology” provides the way to give tacit recognition to India’s nuclear weapons programme without violating any basic tenet of the NPT.

with regard to its strategic programmes.¹⁵ Through the Separation Plan India's strategic programmes have been exempted from any oversight by any external agency or power. As agreed to in the Joint Statement, there is a mention in the Separation Plan that the identified civil nuclear facilities would come under the purview of IAEA safeguards. There is an understanding between India and the US that India will keep its military facilities outside the safeguarded domain. There is also no restriction on India expanding its military facilities. The cooperation with regard to nuclear technology, reactors, and nuclear fuel would be restricted to peaceful uses of nuclear energy.

A close reading of the United States India Nuclear Cooperation Promotion Act passed by the House of Representatives indicates that India can develop its nuclear arsenal within the facilities that it has declared to be military. Sections 123 and 128 of the US Atomic Energy Act deal with US nuclear cooperation and export to other countries. These Sections stipulate that the US will not enter into any cooperation with a "Non-Nuclear Weapon State" that does not accept "fullscope safeguards" or has activities that would imply non-peaceful uses of nuclear technology.¹⁶ Section 123 a (2) of the US Atomic Energy Act has been waived with regard to India.¹⁷ By waiving this Section, the US eliminates the application of fullscope safeguards (applicable to Non Nuclear Weapon States) as a precondition for cooperation with India. Thus the US de facto recognizes the existence of the Indian nuclear weapons program. Section 128 has also been waived with regard to India. This builds upon the waiver of Section 123 a (2) and allows for

There are no restrictions placed on India for the development of the current generation of nuclear weapons.

export of nuclear material and technology to India even though all Indian nuclear activities may not come under IAEA safeguards.

However, waiver of Section 128 is subject to certain conditions that are mentioned in Section 129 of the same Act. These are that

- (a) India shall not conduct a new nuclear weapons test,
- (b) it shall not terminate, abrogate or materially violate an IAEA safeguards agreement and
- (c) it shall not transfer weapons technology to Non-Nuclear Weapon States.

By waiving Section 129 (1) (A) of the Atomic Energy Act "for any activity that occurred on or before July 18, 2005" the US recognizes the legitimacy of India's nuclear weapons tests starting from 1974 up to 2005.

The US has also waived Section 129 (1) (D). This allows India to continue its development of nuclear weapons. Additionally, 129 (2) (C) has also been waived with regard to India. This allows India to engage in trade in nuclear materials, reprocessing technology and allows India's participation in all cooperative activities in the civilian nuclear field. It would appear from this analysis that there are no restrictions placed on India for the development of the current generation of nuclear weapons.

Does the deal constrain India's independence to test further?

Many members of the political and scientific communities are concerned that the deal would

¹⁵ For a view that the deal compromises India's strategic autonomy see Bharat Karnad, "PM is Risking National Interest", *The Asian Age*, 25 August 2006 and Satish Chandra, Ajit Doval and Vikram Sood, "N-Deal is an Unmitigated Disaster", *The Asian Age* 15 August 2006. Also see "Appeal to Parliamentarians", *Deccan Herald*, 15 August 2006. This is an open letter to Indian Parliament released by a group of former members of Indian Nuclear Programme. These scientists are Dr. H N Sethna, Dr. M R Srinivasan, Dr. P K Iyengar, Dr. A Gopalakrishnan, Dr. S L Kati, Dr. A N Prasad, Dr. Placid Rodriguez and Dr. Y S R Prasad.

¹⁶ Put simply if a country was not one of the five nuclear weapon powers (US, Russia, UK, France and China) the US would not co-operate with it unless it placed all its nuclear facilities under safeguards. These amendments make India an exception to this US Policy.

¹⁷ The Full Text of the US Atomic Energy Act is available at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0980/ml022200075-vol1.pdf#pagemode=bookmarks&page=14>

constrain India's options to conduct further nuclear tests.¹⁸ In the July 18, 2005 Joint Statement Prime Minister Manmohan Singh has mentioned the "continuation of India's unilateral moratorium on nuclear testing". India declared a unilateral moratorium on nuclear testing after Pokhran II in 1998. It also said that the Pokhran II explosions had provided sufficient technical data to design, refine and develop the weapons required for India's nuclear arsenal.¹⁹ However, if there is a change in the international geo-political environment warranting the development of new kinds of nuclear weapons further tests cannot be ruled out.²⁰ In such a situation India should have the freedom to respond appropriately. In his address to Parliament, the PM specifically referred to the proposed linkage between further nuclear tests and continuation of civil nuclear cooperation. He stated:

"The US has been intimated that reference to nuclear detonation in the India US bilateral nuclear cooperation agreement as a condition for future cooperation is not acceptable to us. We are not prepared to go beyond a unilateral voluntary moratorium on nuclear testing as indicated in the July statement."²¹

This means that any condition in the Indo-US Civil Nuclear Cooperation Agreement that links "further testing and cooperation" will not be acceptable to India. The US House of Representatives Act, as it stands, asks the President to take action against India

in case India tests again. This issue needs to be resolved in a manner acceptable to both sides.

Does the deal cap India's fissile material stockpiles?

Many people in India have expressed concerns about US laws that attempt to cap India's fissile material stockpile as part of the deal.²² The Act mentions a multilateral, regional as well as a unilateral moratorium on production of fissile material by India. The Act urges for "a moratorium on production of fissile material for nuclear explosive purposes by India, Pakistan and the People's Republic of China at the earliest possible date."²³ The Act also talks

India is willing to join only a non-discriminatory, multi-laterally negotiated and internationally verifiable FMCT

about the steps that the US should take to encourage India to unilaterally stop production of fissile material for nuclear weapons. The Prime Minister in his statement to Parliament has explicitly addressed this concern. He clarified "We are only committed to negotiate a Fissile Material Cut-off Treaty in the Conference on Disarmament in Geneva, a commitment which was undertaken by the previous government. India is willing to join only a non-discriminatory, multi-laterally negotiated and internationally verifiable FMCT as and when it is concluded in the Conference on Disarmament, again provided our security interests are fully addressed."²⁴ This clearly states that India will not entertain any attempts for a unilateral or regional moratorium on its fissile material production.

¹⁸ See for example Bharat Karnad, "PM is Risking National Interest", *The Asian Age*, 25 August 2006, "Appeal to Parliamentarians" *Deccan Herald*, 15 August 2006. Also see M R Srinivasan's interview in *The Hindu* titled "Safeguards, end to US Restrictions must be interlocking actions", 27 July 2006.

¹⁹ See Joint Statement by Department of Atomic Energy and Defence Research and Development Organisation, 17 May 1998. Available at <http://www.ipcs.org/newDatabaseIndex3.jsp?check=90&database=1005>

²⁰ While it may not be necessary to conduct further tests for the development of the current generation of nuclear weapons, the possibility of further tests for new kinds of weapons cannot be completely ruled out. There is no information in the public domain that could help us take a clearer position on this issue.

²¹ PM's Speech in Rajya Sabha on 17 August 2006. n.3

²² M R Srinivasan's interview in *The Hindu* titled "Safeguards, End to US restrictions must be interlocking actions", 27 July 2006.

²³ This only looks like a theoretical possibility given the current regional situation. It is unlikely that India, China and Pakistan will agree to such a regional arrangement unless it is clearly and explicitly linked to a global multilateral treaty.

²⁴ PM's Speech in Rajya Sabha on 17 August 2006. n.3

The analysis also suggests that India can build up its nuclear arsenal and fissile material stocks subject, of course, to certain international developments such as the conclusion of a FMCT.²⁵ One can also state with a fair degree of confidence that the prospects of a multilateral internationally acceptable FMCT do not appear to be very bright.²⁶ It would, therefore, be logical to conclude that concerns related to the FMCT limiting India's stockpiles of fissile material might be overstated.

What is the meaning of full civil nuclear cooperation?

Concerns have been raised about the nature of "full" civil nuclear cooperation with the US. Many in India feel that India will not be a full and equal partner of the US.²⁷ One can interpret "full" civil nuclear cooperation to include all nuclear activities starting from the mining of ores to the production of power and the reprocessing of the spent fuel. This

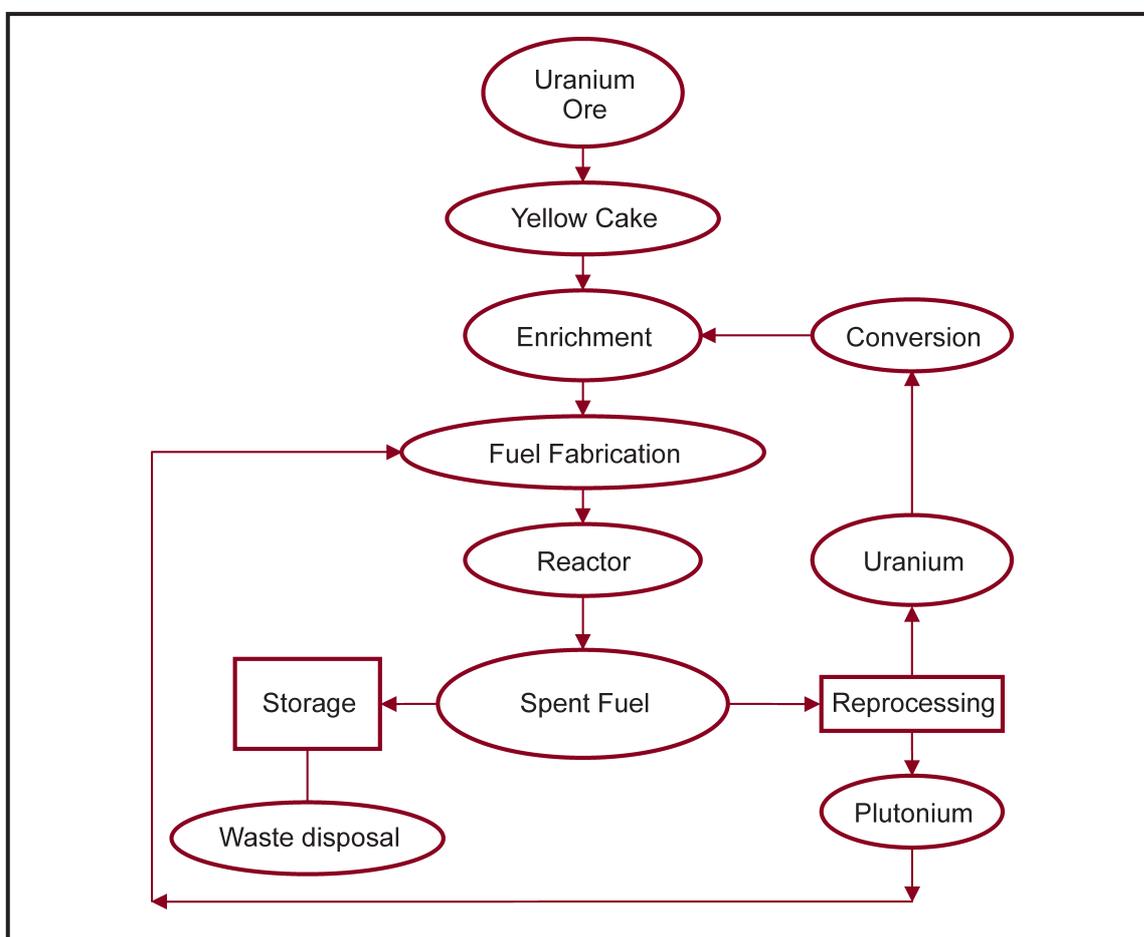


Figure 1: Nuclear Fuel Cycle

²⁵ Even without the deal India uses its available nuclear fuel both for the production of power as well as for the development and stockpiling of nuclear weapons. One would logically assume that the Separation Plan should take care of Indian needs for the current generation of weapons along with some margins of safety for meeting possible future requirements.

²⁶ The FMCT negotiations have been going on without much progress in the Conference on Disarmament (CD) in Geneva since 1994. There is no consensus on the nature and scope of a proposed FMCT.

²⁷ See for example, A. Gopalakrishnan, "Last Chance for the US to Decide", *The Asian Age*, 23 August 2006.

interpretation would bring both enrichment and reprocessing technologies within the ambit of “full” cooperation. Alternatively, one can interpret “full” to include only the supply of fuel and reactors and the storage of the spent fuel, as has been the practice of US cooperation with many non-weapon states.

Figure 1 explains in detail the steps in going from the mining of uranium ore to production of power and the reprocessing of the spent fuel. One can see through this diagram that there are a large number of activities that could, in principle, be covered under the term “full” cooperation. However, from a practical-technical point of view the most important requirements for producing power are the supply of nuclear fuel, nuclear reactors to burn the fuel, and ways of dealing with the spent fuel whether through storage or reprocessing. The US is of the view that enrichment technology does not constitute an essential part of the value chain for producing power. The US also does not consider reprocessing of the spent fuel as essential for the production of power.

In view of the fact that India is neither a Nuclear Weapon State nor a Non-Nuclear Weapon State but falls in a new category called “responsible state with advanced nuclear technology”, the issue of what constitutes “full” civil nuclear cooperation has to be specified during negotiations. While the Joint Statement does not elaborate upon what constitutes “full” civil nuclear cooperation, the Prime Minister in his address to Parliament spelt out his understanding of full cooperation.

“First, there is the question of full Civil Nuclear Cooperation. Honourable Members have asked

what is my understanding of that. I would like to share what our approach is and what our understanding is by the meaning of full Civil Nuclear Cooperation. The central imperative in our discussion with the United States on Civil Nuclear Cooperation is to ensure the complete and irreversible removal of existing restrictions imposed on India through iniquitous restrictive trading regimes for the past three decades. We seek the removal of restrictions on all aspects of cooperation and technology transfers pertaining to Civil Nuclear Energy that is ranging from the supply of nuclear fuel, nuclear reactors to reprocessing spent fuel that is all aspects of a complete nuclear fuel cycle.”²⁸

However, whether the US will give India all these technologies is far from certain. Till now the Bush administration has stated that transfer of reprocessing and enrichment technology will not be a part of the bilateral agreement. In response to a question posed by Senator Lugar on Indo-US Nuclear Deal in the House International Relations Committee, the Bush administration responded, “We have also indicated to our NSG

partners that we do not intend to transfer enrichment or reprocessing technologies. Our bilateral agreement will not permit such transfers.”²⁹ This indicates that there is a divergence of views between India and the US on what constitutes full civil nuclear cooperation. In the light of the Prime Minister’s statement mentioned above, it would seem that for India while enrichment technology may not form a part of full civil nuclear cooperation, reprocessing technologies would certainly come under the category “full civil nuclear cooperation”. For the US neither enrichment nor reprocessing technologies

²⁸ PM’s Speech in Rajya Sabha on 17 August 2006. n.3

²⁹ Cited in US House of Representatives Report 109-590 on the United States India Nuclear Cooperation Promotion Act. The Report is available at [http://thomas.loc.gov/cgi-bin/cpquery/R?cp109:FLD010:@1\(hr590\)](http://thomas.loc.gov/cgi-bin/cpquery/R?cp109:FLD010:@1(hr590))

would come under the ambit of “full civil nuclear cooperation.”

However, from a practical point of view it is essential that India is able to either reprocess the spent fuel for use in another safeguarded reactor or return it to the supplier state. This issue has to be resolved for the agreement to be acceptable to India.

Nuclear Fuel Cycle

Concerns have been expressed that the cooperation will increase India’s dependence on a US-led nuclear fuel cycle.³⁰ These stem from fears that such cooperation may result in a uranium-led fuel cycle dominating the production of power. As a consequence the indigenous three-phased approach that would maximally utilize India’s large thorium reserves would get downgraded because of inadequate political and managerial support. Addressing these concerns, the PM said in his address to Parliament, “the integrity of our three stage nuclear programme will not be affected. The autonomy of our research and development activity, the development of the fast breeder and thorium technology in the nuclear field will remain unaffected.”³¹

Which particular fuel cycle dominates in the production of power will be determined largely by commercial considerations. There are also technical and commercial factors that might actually make it attractive to have a number of fuel cycles working together in the commercial realm.³²

Decisions related to protecting the Indian three-stage fuel cycle are completely outside the proposed cooperation arrangements. These decisions are dependant upon the Government of India and the organizations involved in the nuclear area. It is contingent upon them to protect critical areas of technology, which have both military and commercial potential.

Would the deal adversely affect India’s Research and Development in nuclear science and technology?

In a letter to Parliament that was released to the Press a group of eminent scientist had expressed the concern that “the Indo-US deal in the form approved by the US House of Representatives infringes on our independence for carrying out research and development (R&D) in nuclear science & technology. Our R&D should not be hampered by external supervision and control, or by the need to satisfy any international body.”³³

There are two broad categories of research; applied research and basic or fundamental research. The Separation Plan protects nuclear activities that would be important both from strategic and commercial considerations. The Fast Breeder technology programme falls outside the civilian domain. One would expect that Bhaba Atomic Research Centre (BARC) and other critical facilities would also be outside the purview of international safeguards. The list of nine R&D institutions included in the Separation Plan are entities that deal only with basic and

³⁰ For a representative exposition of these arguments see Siddharth Varadarajan, “Questions Arise on Reprocessing Restrictions” *The Hindu*, 28 July 2006 and N S Rajaram, “Nuclear Deal the Untold Story”, *The Hindu*, 20 August 2006. For a critique of the nuclear deal and India’s energy security see A Gopalakrishnan, “Energy Security As Scapegoat” *The Asian Age*, 14 August 2006.

³¹ PM’s Speech in Rajya Sabha on 17 August 2006. n.3

³² S. Banerjee, “Prospects for Indo-US Civilian Nuclear Cooperation”, in K.P. Vijayalakshmi, Arvind Kumar, Sonika Gupta & S. Chandrashekar (Eds.), *Changing Contours of Indo-US Relations* (Bangalore: National Institute of Advanced Studies, 2006), pp.192-205.

³³ “Appeal to Parliamentarians”, *Deccan Herald*, 15 August 2006.

fundamental R&D.³⁴ There is, therefore, no reason why these facilities should come under the purview of IAEA or any other international policing authority.

Does the Deal facilitate foreign access to sensitive Indian technology?

Does the deal facilitate or even require foreign access to sensitive Indian technology? Sensitivity can have two component; military or commercial. The Separation Plan has explicitly protected the military component very clearly from international inspection or interference. There are technologies, like the Fast Breeder Reactor technology that are dual use and that may also have large commercial value. These are also protected under the Separation Plan. Further, India has the right to declare any new facilities as either civilian or military. It would therefore appear that as it stands the proposed agreement does not provide foreign access to sensitive India technology.

Does the nature and scope of the proposed safeguards adversely affect the Indian Nuclear Programme?

Some scientists have raised the following concerns with regard to safeguards. "Safeguards are understandable where external assistance for nuclear materials or technologies are involved. We have agreed to these before, and we can continue to agree to this in the future too, but strictly restricted to those facilities and materials imported from external sources."³⁵ This would imply that if any civilian facility did not use imported material or

equipment it should not be subject to international safeguards.

All Non-Nuclear Weapon States engaged in international nuclear cooperation enter into a fullscope safeguards agreement with the IAEA. The Nuclear Weapon States, on the other hand, have the liberty to enter into a voluntary safeguards agreement on a case-by-case basis with the IAEA.

Prior to 1997, Information Circular (INFCIRC) 153³⁶ formed the basis for all safeguards agreements between the Non-Nuclear Weapon States signatories to the NPT and the IAEA. In 1997 an Additional Protocol INFCIRC 540 was negotiated.³⁷

INFCIRC 153 and the complete provisions of INFCIRC 540 applicable to Non Nuclear Weapon States should not apply to India.

The provisions of this Additional Protocol cover all activities related to the Nuclear Fuel Cycle (including R&D) from the mining of ores to the processing of the spent fuel. The scope and nature of the inspection and verification provisions specified under this protocol are significantly more intrusive, making it much more difficult for a non-nuclear weapon state to engage in clandestine activities.

The foreword to the Model Protocol (INFCIRC 540) also talks about its applicability to different kinds of states. INFCIRC 540 is a Model Protocol that could be followed for safeguards agreements with all states including nuclear weapon states. However, there are major differences in how the Model Protocol is applied to Non-Nuclear Weapon States and Nuclear Weapon States. All provisions of the Model Protocol, without exception, are applicable to Non-Nuclear

³⁴ These are (a) Tata Institute of Fundamental Research, (b) Variable Energy Cyclotron Centre, (c) Saha Institute of Nuclear Physics, (d) Institute for Plasma Research, (e) Institute of Mathematical Sciences, (f) Institute of Physics (g) Tata Memorial Centre, (h) Board of Radiation and Isotope Technology, (i) Harish Chandra Research Institute. As mentioned in the Separation Plan. n.9 available at <http://www.hindu.com/2006/03/08/stories/2006030808431100.htm>

³⁵ "Appeal to Parliamentarians", *Deccan Herald*, 15 August 2006.

³⁶ Full Text of INFCIRC 153 is available at www.iaea.org/Publications/Documents/Infcircs/Others/inf153.shtml

³⁷ Full Text of INFCIRC 540 is available at <http://www.iaea.org/Publications/Documents/Infcircs/1998/infirc540corrected.pdf#search=%22INFCIRC%20540%22>

Weapon States. A Nuclear Weapon State, on the other hand could selectively choose those parts of the Model Protocol which it felt could help in the control of proliferation. The foreword also recognizes the existence of “other states” that are neither Nuclear Weapon States nor Non-Nuclear Weapon States with whom also an additional protocol can be negotiated and for which the Model Protocol could be used as a basis for arriving at a safeguards agreement.

Since the coming into force of INFCIRC 540 and as of 7th February 2005, 57 Additional Protocols have been approved by the Board of IAEA.

All the Nuclear Weapon States (US, Russia, UK, France and China) have signed Additional Protocols with the IAEA.

If the Indo-US nuclear deal goes through, India will fall into a new category and an India-specific safeguards regime will have to be negotiated with the IAEA. INFCIRC 153 and the complete provisions of INFCIRC 540 applicable to Non Nuclear Weapon States should not apply to India. The Act passed in the House of Representatives does not refer to INFCIRC 153 or INFCIRC 540 that demands the application of full scope safeguards not only to nuclear materials and facilities but to all aspects of a nuclear fuel cycle.³⁸

There also seems to be a lot of confusion with regard to the interpretation of India’s declaration on safeguards in the Joint Statement. The Joint Statement says, “taking a decision to place *voluntarily* its civilian nuclear facilities under IAEA safeguards.”

India and the US have broadly the same goals with respect to controlling proliferation of nuclear weapons and other WMDs.

The use of the word “voluntarily” in the Joint Statement has been used to argue for the adoption of “voluntary” safeguards by India. This argument is also extended to make a case for a Nuclear Weapon State status for India. One can see clearly that this was not the intention expressed either by India or the US in the Joint Statement. As mentioned earlier, India falls into a new category of states. This has also been clarified by the Prime Minister in his statement to Parliament. Insistence on the condition that safeguards will apply only to civilian facilities that use imported fuel or equipment is clearly not in consonance with India’s commitment in the Joint Statement.

If India goes back on this commitment it may be difficult for the Bush administration to sell the deal to the US Congress and the NSG.

Does the deal impact the independence of India’s foreign policy and specifically its relations with Iran?

The debate on the deal has centered on the possibility of the US arm-twisting India to support it in its attempts to rein in Iran. Many people also believe that the deal will constrain the conduct of India’s foreign policy and subject it to US control.³⁹

The House of Representatives Act on stipulates the following:

“The US shall secure India’s full and active participation in US’ efforts to dissuade, isolate, and, if necessary, sanction and contain Iran for its efforts to acquire WMD, including a nuclear

³⁸ The version of the bill introduced in the Senate (United States India Peaceful Cooperation Atomic Energy Cooperation Act) does mention INFCIRC 540. It states, “the term “Additional Protocol” means a protocol additional to a safeguards agreement with the IAEA, as negotiated between a country and the IAEA based on a Model Additional Protocol as set forth in IAEA information circular (INFCIRC) 540.” However, this bill has not yet been passed by the Senate. In case this provision is retained in the final version of the bill, it would amount to a violation of the Joint Statement and the Separation Plan. The Full Text of the Senate Bill is available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_bills&docid=f:s3709pcs.txt.pdf

³⁹ See for example Prakash Karat, “Nuclear Deal: Why Avoid Sense of Parliament?”, *The Hindu*, 12 August 2006.

weapons capability (including the capability to enrich or process nuclear material), and the means to deliver WMD.”⁴⁰

In the Joint Statement of 18th July 2005, Prime Minister Manmohan Singh agreed to “refraining from transfer of enrichment and reprocessing technologies to States that do not have them and supporting international effort 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 Regimes (MTCR) and Nuclear Suppliers Group (NSG) guidelines.”

India and the US, therefore, have broadly the same goals with respect to controlling proliferation of nuclear weapons and other WMDs. The issue of India’s relations with Iran involves many dimensions including issues related to nuclear weapons and other WMDs. Through the passage of the WMD Act, India is committed to containing and preventing the proliferation of WMDs regardless of the conclusion of the nuclear deal between India and the US. How India will act and intervene with issues related to Iran’s possible acquisition of nuclear weapons and WMDs could and should be worked out on a case-by case basis. Any action taken by India with regard to Iran’s acquisition of WMD capability should conform to the broad contours of the WMD Act. Ideally such actions and interventions should take place in cooperation with other members of the international community including the US. The expectation of the US from India as a result of deal as stated in the Act is to

“induce the country to give greater political and material support to the achievement of the US’ global and regional non-proliferation objectives especially with respect to dissuading, isolating, and if necessary sanctioning and containing States that sponsor terrorism and terrorist groups that are seeking to acquire a nuclear weapons capability and the other WMD capability and the means to deliver such weapons”.⁴¹

This only refers to broad contours of cooperation in non-proliferation and does not bind India to any specific course of action. The Prime Minister has categorically ruled out the introduction of any prescriptive suggestions with regard to Iran specifically or to our foreign policy in the bilateral agreement. This clarifies that no legislation in the US Congress is binding on India unless it is reflected in the final bilateral agreement.

Will the deal force India to join the Proliferation Security Initiative?

There have been concerns raised about India subscribing to the Proliferation Security Initiative (PSI). The main purpose of this US-led initiative has been to use military and other tools available with states to interdict shipments of Weapons of Mass Destruction and missile related equipment and technologies. As of now, it is not a formal treaty that a state joins. It is rather the commitment that a state makes to a Statement of Interdiction Principles.⁴²

The operating elements of the PSI do raise certain legal issues such as the liability that a state incurs under international law for unlawful boarding and seizure. Till now India has neither criticized nor

⁴⁰ The United States India Nuclear Cooperation Promotion Act, n.1

⁴¹ Ibid.

⁴² Text of Statement of Interdiction Principles is available at <http://www.state.gov/t/np/rls/fs/23764.htm>

endorsed the PSI though it does have an interest in preventing clandestine WMD shipments to countries in its region. The US has expressed an interest in India becoming an active member of the PSI and playing the role of a 'regional policeman'.⁴³ India has now agreed to discuss the PSI with the US. India should examine carefully the decision-making procedures to be adopted within the PSI especially those related to interdiction before it takes a position on this issue.

The Prime Minister in his statement to Parliament clarified that PSI was "an extraneous issue as it is outside the framework of the July 18 Joint Statement. Therefore we cannot accept it as a condition for implementing the July Statement."⁴⁴

Annual Review Process

Many people have argued that the Annual Review process that requires the US President to report to the Congress on India's nuclear programme will impact India adversely. Such a review will turn a permanent waiver of restriction on India into an annual ritual in the US Congress. While there is no reporting obligation on India under this Act, it does raise the level of uncertainty with regard to proposed commercial and other arrangements under the deal. Taking note of these concerns, the Prime Minister in his statement to Parliament has categorically said that an Annual Review process as a condition for the cooperation is not acceptable to India.

Conclusion

From the above analysis, it would appear that there are four main areas in the deal on which India and US need to align their respective positions to be compatible with the Joint Statement.

The challenge is to come up with a framework that does not explicitly demand a moratorium on further Indian tests and also satisfies the US Congress' concerns.

There seems to be some divergence of views on the question of further nuclear testing by India. While India has committed to the continuation of its unilateral moratorium, any mention of a "no weapon test" in the final agreement would be unacceptable to India. The US House of Representatives Act directly links the continuation of the cooperation with a "no weapons test" provision. Section 129 of the US Atomic Energy Act does provide for an exception in the event of a further nuclear test by India, though this exception depends upon the discretion of the President of the US.⁴⁵ This may not be a good enough guarantee for continued nuclear cooperation in case India decides to test. Further, Section 129(1) talks about nuclear detonation by "Non-Nuclear Weapons States" and therefore its provisions cannot be applicable to India, which is neither a "Non Nuclear Weapon State" nor a "Nuclear Weapon State." Other provisions of Section 129 that apply to "Non-Nuclear Weapons States", i.e. Section 129 (1) (D)⁴⁶ and Section 129 (2) (C)⁴⁷ have already been waived for India. It would be in the fitness of things to waive Section 129 (1) with regard to India. This would ensure that the US Atomic Energy Act, as applicable to India, is

⁴³ Collin Powell made this statement during his visit to India as Secretary of State in March 2004. It was widely reported both by Indian and American print and visual media.

⁴⁴ PM's Speech in Rajya Sabha on 17 August 2006. n.3

⁴⁵ Section 129 states that in event of the detonation of a nuclear explosive device, all nuclear exports would cease "unless the President determines that cessation of such exports would be seriously prejudicial to the achievement of United States' non-proliferation objectives or otherwise jeopardize the common defense and security." n.17

⁴⁶ Allowing India to continue with its nuclear weapons programme.

⁴⁷ Allowing India to sell nuclear technology to non-nuclear weapons states under safeguards.

congruent with President Bush's categorization of India as a "responsible state with advanced nuclear technology."

Will the US Congress agree to an implicit policy of allowing India to test further without recourse to some preventive and possibly punitive action on the part of the US? This is the billion-dollar question. One option would be for the final agreement between the two sides to remain silent on this issue allowing both sides the freedom to interpret it within their own political contexts. However, while this avoids the problem in the bilateral agreement, any stipulation in the amended Atomic Energy Act that any new detonation will invite sanctions may not be acceptable to India. The challenge before the Bush administration and the Manmohan Singh government is to come up with a framework that does not explicitly demand a moratorium on further Indian tests and also satisfies the US Congress' concerns.

The definition of "full" civil nuclear cooperation needs to be clarified by both sides as there seem to be differing understandings of this term by the two parties. Since the nature of "full" cooperation was not defined in the Joint Statement, its scope is open to interpretation by both sides. The Indian argument for the transfer of reprocessing technology arises from energy and environmental security concerns. While enrichment may not be essential for the commercial power production industry in India, reprocessing spent fuel is seen to be essential. The US seems to prefer keeping both enrichment and reprocessing technologies outside the proposed nuclear cooperation

From the PM's statement in Parliament it would seem that India is keen to push for transfer of reprocessing technology. However, there is no such indication regarding enrichment technology from the Prime

Minister. Unless India can reprocess safeguarded spent fuel in safeguarded reprocessing facilities, it will be saddled with massive amounts of spent fuel that will be an environmental liability and a security risk. The final agreement between India and the US must be explicit on the nature and scope of "full" cooperation. Ideally, the final agreement must satisfy India's political concerns of "full" cooperation as well as its energy and security concerns with regard to spent fuel.

There is also widespread concern in India on the independence of its foreign policy with regard to Iran. This issue begs the question whether US policy on Iran runs contrary to Indian interests. At present, there is a convergence of interest between India and the

Unless India can reprocess safeguarded spent fuel in safeguarded reprocessing facilities, it will be saddled with massive amounts of spent fuel.

US in ensuring that Iran does not go nuclear. However, in principle India is free to decide upon any strategy of its choice to achieve this objective. It appears that over-enthusiasm on part of the US Congress by raising this issue explicitly in the Act, might

actually cost the Bush administration much needed support that India would be willing to offer, keeping in mind its own national interest. Needless to say, any provision in the final agreement tying India down to a specific course of action would make the deal politically unviable in India.

Finally, there is the question of the Annual Review of nuclear cooperation with India. The introduction of the Annual Review process in the Act, diminishes the stature of what was envisioned as a partnership of equals in the Joint Statement to a mere patron-client relationship. It also introduces an element of uncertainty in the fulfilling of the commercial potential of the deal. While the Review process places no reporting obligations on India, the Indian Government must take it up and get it resolved in its favour. The US Congress might want to exercise authority upon the implementation of the civil nuclear cooperation

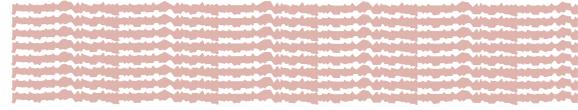
agreement, but a legislative stipulation, however non-binding on India, will be the wrong way to go about this issue.

An objective assessment of the proposed agreement on civil nuclear cooperation indicates that there is much to gain for both sides. India needs power for its growth and if it can get this without having to surrender its nuclear weapons option, it is a big gain. For the US, India is clearly a potential partner and an ally in its war against terror. India is also a big market with a clear potential to grow in high technology sectors like nuclear energy. Clearly, it is in both countries interest to cooperate in a vital area like nuclear energy. However, the baggage of history is an issue that both sides have to deal with. The nonproliferation lobby is powerful in the US. The anti-US lobby in the Indian political establishment is also vocal and powerful. Decades of isolation have made it difficult for the Indian technology elite to believe that the US can be trusted.

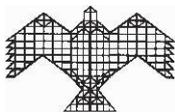
The Joint Statement was an exceedingly bold and daring first step to change the basic parameters of the relationship between India and the US. Can Manmohan Singh and George W. Bush rise above the tumult of day-to-day problems and take farsighted and bold decisions that build upon the path breaking Joint Statement to transform the relations between the two countries?

We believe that this is a worthwhile task to do both for the US and India. The benefits of such cooperation far outweigh any costs that the two sides may have to incur to carry this deal through to fruition. This aspect, more than anything, else should lead to a positive outcome- a win win situation for both sides. In sum, the Indo-US nuclear deal as envisioned in the Joint Statement will fundamentally transform relations between the two countries. For this to happen, it is essential that the final agreement between the two sides adhere not only to the letter but also to the spirit of the Joint Statement.

International Strategic & Security Studies Programme



The International Strategic & Security Studies Programme at NIAS promotes and conducts research that addresses the strategic and security concerns of India. It has over the years carried out a number of studies in technology dominated areas of international security - nuclear weapons and missiles. NIAS has also facilitated exchange of knowledge and views between interested groups working around the globe on issues related to international security. The programme focuses on the region with a special emphasis on China and Pakistan.



International Strategic and Security Studies Programme

NATIONAL INSTITUTE OF ADVANCED STUDIES

IISc Campus, Bangalore - 560 012, India

Tel: 2360 4351 / 6594 / 2760 / 2050 Fax: 2360 6634

Email: arvind@nias.iisc.ernet.in