

MR. SPEAKER: I will come to that issue also.

...(Interruptions)

SHRI BASU DEB ACHARIA: Sir, we could not raise it yesterday....(Interruptions)

[Translation]

PROF. VIJAY KUMAR MALHOTRA (South Delhi): This should not be recorded....(Interruptions)

MR. SPEAKER: I have not allowed them.

...(Interruptions)

[English]

MR. SPEAKER: Nothing is being recorded. Now, the hon. Prime Minister to make his statement.

(Interruptions)\*

MR. SPEAKER: Please maintain silence in the House. This is a very important matter.

...(Interruptions)

12.08 hrs.

#### STATEMENT BY PRIME MINISTER

**Re: Discussions on Civil Nuclear Energy Cooperation with the United States in the context of recent visit of the President of the USA**

[English]

**\*\*THE PRIME MINISTER (DR. MANMOHAN SINGH):** Mr. Speaker, Sir, in my statement on 27th February, 2006 I had provided an assurance that this august House will be informed of developments in our discussions with the United States on separation of our civilian and military nuclear facilities. I now inform this august House of developments since my *suo motu* statement of 27th February.

The President of the United States. His Excellency, Mr. George W. Bush visited India between 1 March 2006-3 March 2006....(Interruptions)

\*Not recorded.

\*\*Also Place in Library. See No. LT-3788/2006.

MR. SPEAKER: Please maintain silence in the House.

DR. MANMOHAN SINGH: His visit provided our two countries an opportunity to review progress made in deepening our strategic partnership since the Joint Statement issued during my visit to Washington last July. Our discussions covered the expansion of our ties in the field of agriculture, economic and trade cooperation, energy security and clean environment, strengthening innovation and the knowledge economy, issues relating to global safety and security and on deepening democracy. Expanded cooperation in each of these areas will have a significant impact on India's social and economic development. The full text of the Joint Statement issued during President Bush's visit is placed on the Table of the House.

Sir, I have pleasure in informing the House that during President Bush's visit, as part of the process of promoting cooperation in civilian nuclear energy, agreement was reached between India and the United States on a Separation Plan. Accordingly, India will identify and separate its civilian and military nuclear facilities, and place its civilian nuclear facilities under International Atomic Energy Agency (IAEA) safeguards.

Sir, I place on the Table of the House the Separation Plan that has been drawn up by India, and agreed between India and the United States in implementation of the India-United States Joint Statement of July 18, 2005....(Interruptions)

MR. SPEAKER: Those of you who have urgent issues to discuss, please go outside and discuss.

DR. MANMOHAN SINGH: Sir, I would like to outline some salient elements of the Separation Plan:—

- (i) India will identify and offer for IAEA safeguards 14 thermal power reactors between 2006-14. There are 22 thermal power reactors in operation or currently under construction in the country. Fourteen of these will be placed under safeguards by 2014 in a phased manner. This would raise the total installed thermal power capacity in Megawatts under safeguards from 19 per cent at present to 65 per cent by 2014.

I wish to emphasise that the choice of specific nuclear reactors and the phases in which they would be placed under safeguards is an Indian decision. We are preparing a list of 14 reactors that would be offered for safeguards between the years 2006-14.

- (ii) Sir, we have conveyed that India will not 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 and D stage. This technology will take time to mature and reach an advanced stage of development. We do not wish to place any encumbrances on our Fast Breeder programme, and this has been fully ensured in the Separation Plan.
- (iii) 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. This means that India will not be constrained in any way in building future nuclear facilities, whether civilian or military, as per our national requirements.
- (iv) Sir, India has decided to permanently shut down the CIRUS reactor, in the year 2010. The fuel core of the Apsara reactor was purchased from France, and we are prepared to shift it from its present location and make it available for placing under safeguards in the year 2010. Both CIRUS and Apsara are located at the Bhabha Atomic Research Centre. We have decided to take these steps rather than allow intrusive inspections in a nuclear facility of high national security importance. We are determined that such steps will not hinder on-going Research and Development.
- (v) Reprocessing and enrichment capabilities and other facilities associated with the fuel cycle for our strategic programme have been kept out of the Separation Plan.
- (vi) One of the major points addressed in the

Separation Plan was the need to ensure reliability of fuel supplies, given our unfortunate past experience with regard to interruption in supply of fuel for Tarapur. We have received commitments from the United States for the reliable supply of fuel to India for reactors that will be offered for safeguards. The United States has also reaffirmed its assurance to create the necessary conditions for India to have assured and full access to fuel for such reactors. Under the July 18 Joint Statement, the United States is committed to seeking agreement from its Congress to amend 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 market for nuclear fuel, including reliable, uninterrupted and continual access to fuel supplies from firms in several nations. This has been reflected in the formal understandings reached during the visit and included in the Separation Plan.

- (vii) To further guard against any disruption of fuel supplies for India, the United States is prepared to take other additional steps such as:—
  - (a) incorporating assurances regarding fuel supply in a bilateral U.S.-India agreement on peaceful uses of nuclear energy which would be negotiated.
  - (b) The United States will join India in seeking to negotiate with the International Atomic Energy Agency an India-specific fuel supply agreement.
  - (c) The United States will also 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.
  - (d) 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

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include countries such as Russia, France and the United Kingdom to pursue such measures as would restore fuel supply to India.

Sir, in light of the above understandings with the United States, an India-specific safeguards agreements will be negotiated between India and the International Atomic Energy Agency. In essence, an India-specific safeguards agreement would provide: on the one hand safeguards against withdrawal of safeguarded nuclear material from civilian use at any time, and on the other, permit India to take corrective measures 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 International Atomic Energy Agency. In the terms of the separation plan, there is hence assurance of uninterrupted supply of fuel to reactors that would be placed under safeguards together with India's right to take corrective measures in the event fuel supplies are interrupted. The House can rest assured that India retains its sovereign right to take all appropriate measures to fully safeguard its interests.

During my *suo motu* statements on this subject made on July 29, 2005 and on February 27, 2006. I had given a solemn assurance to this august House, and through the hon. Members to the country, that the separation plan will not adversely affect our country's national security. I am in a position to assure the Members that that is indeed the case. I might mention:—

- (i) That the separation plan will not adversely affect our strategic programme. There will be no capping of our strategic programme, and the separation plan ensures adequacy of fissile material and other inputs to meet the current and future requirements of our strategic programme, based on our assessment of the threat scenarios. No constraint has been placed on our right to construct new facilities for strategic purposes. The integrity of our nuclear doctrine and our ability to sustain a minimum

credible nuclear deterrent is adequately protected. Our nuclear policy will continue to be guided by the principles of restraint and responsibility.

- (ii) The separation plan does not come in the way of the integrity of our three-stage nuclear programme, including the future use of our thorium reserves. Sir, the autonomy of our research and development activities in the nuclear field will remain unaffected. The Fast Breeder Test Reactor and the Prototype Fast Breeder Reactor remain outside safeguards. We have agreed, however, that future civilian thermal power reactors and civilian fast breeder reactors would be placed under safeguards, but the determination of what is civilian is solely an Indian decision.

As I mentioned in my Statement on February 27, the Separation Plan has been very carefully drawn up after an intensive internal consultation process overseen by my Office. The Department of Atomic Energy and our nuclear scientific community have been associated with the preparation of the Separation Plan. The Chairman of the Atomic Energy Commission and the Principal Scientific Adviser to the government of India were actively involved closely at every stage. I am in a position to assure the hon. Members that we have not permitted information of national security significance to be compromised in any way during the negotiations.

Sir, I believe that the significance of the July 18, 2005 Statement is the prospect it offers for ending India's nuclear isolation. It will open up prospects for cooperation not only with the United States but with countries like Russia, France and other countries with advanced nuclear capabilities, including those from the Nuclear Suppliers Group. The scope for cooperation in the energy related research will vastly expand, so will cooperation in nuclear research activities. India will be able to join the international mainstream and occupy its rightful place among the top countries of the nuclear community. There would be a quantum jump in our energy generating capacity with a consequential impact on our GDP growth. It also ensures India's participation as a full partner in cutting edge multilateral scientific effort in the nuclear field such as ITER and Generation IV Initiative.

Mr. Speaker, Sir, successful implementation of the July 18 Joint Statement requires reciprocal actions by the United States as well as India. Steps to be taken by India will be contingent upon actions taken by the United States. For our part, we have prepared a Separation Plan that identifies those civilian facilities that we are willing to offer for safeguards. The United States Government has accepted this Separation Plan. It now intends to approach the US Congress for amending its laws and the Nuclear Suppliers Group for adapting its guidelines to enable full civilian cooperation between India and the international community. At the appropriate stage, India will approach the IAA to discuss and fashion an India-specific safeguards agreement, which will reflect the unique character of this arrangement. Since such a safeguards agreement is yet to be negotiated it will be difficult to predict its content, but I can assure the House that we will not accept any provisions that go beyond the parameters of the July 19, 2005 Statement and the Separation Plan agreed between India and the United States, on March 2, 2006. We are hopeful that this process will move forward in the coming weeks and months.

I would request the hon. Members to look at this matter through the larger perspective of energy security. Currently, nuclear energy provides only three per cent of our total energy mix. Rising costs and reliability of imported hydrocarbon supplies constitute a major uncertainty at a time when we are accelerating our growth rate. We must endeavour to expand our capabilities across the entire energy spectrum—from clean coal and coal-bed methane, to gas hydrates and wind and solar power. We are actively seeking international partnerships across the board and members of many international initiatives dedicated to energy.

Indeed at the end of my talks with President Bush, we announced Indian participation in two more programmes: the Future-Generation Programme for Zero Emission Thermal Power Plants and the Integrated Ocean Drilling Programme for gas hydrates.

The House will appreciate that the search for an integrated policy with an appropriate mix of energy supplies is central to the achievement of our broader economic or social objectives. Energy is the lifeblood of

our economy. without sufficient and predictable access, our aspirations in the social sector cannot be realized. Inadequate power has a deleterious effect in building a modern infrastructure. It has a direct impact on the optimal usage of increasingly scarce water resources. Power shortage is thus not just a handicap in one sector but a drag on the entire economy.

Mr. Speaker, Sir, I believe that the needs of the people of India must become the central agenda for our international cooperation. It is precisely this approach that has guided our growing partnership with the United States. I would, in particular, draw attention to the launching of the knowledge Initiative in Agriculture with a three year financial commitment to link our universities and technical institutions and businesses to support agricultural education, research, capacity building, including in the field of bio-technology. Our first Green Revolution benefited in substantial measure from assistance provided by the United States. We are hopeful that the Knowledge Initiative on Agriculture will become the harbinger of a second Green Revolution in our country.

Mr. Speaker, Sir, India and the United States have much to gain from this new partnership. This was the main underlying theme of our discussions during the visit of President Bush. The resumption of civilian nuclear energy cooperation would demonstrate that we have entered a new and more positive phase of our ties, so that we can finally put behind us years of troubled relations in the nuclear field. I am confident that this is a worthy objective that will receive the full support of this House.

#### **Text of India-US Joint Statement (02-03-06) issued during President Bush's Visit**

President George W. Bush and Prime Minister Manmohan Singh today expressed satisfaction with the great progress the United States and India have made in advancing our strategic partnership to meet the global challenges of the 21st century. Both our countries are linked by a deep commitment to freedom and democracy; a celebration of national diversity, human creativity and innovation; a quest to expand prosperity and economic opportunity worldwide; and a desire to increase mutual security against the common threats posed by intolerance,

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terrorism, and the spread of weapons of mass destruction. The successful transformation of the U.S.-India relationship will have a decisive and positive influence on the future international system as it evolves in this new century.

Reviewing the progress made in deepening the global partnership between the United States and India since their Joint Statement of July 18, 2005, the President and the Prime Minister reaffirm their commitment to expand even further the growing ties between their two countries. Consistent with this objective, the two leaders wish to highlight efforts the United States and India are making together in the following areas; where they have:—

#### **For Economic Prosperity and Trade**

(1) Agreed to intensify efforts to develop a bilateral Business climate supportive of trade and investment by:—

1. Welcoming the report of the U.S.-India CEO Forum, agreeing to consider its recommendations aimed at substantially broadening our bilateral economic relations, and directing the Chairs of the Indo-U.S. Economic Dialogue to follow up expeditiously with the CEO Forum;
2. Endorsing the efforts of the U.S.-India Trade Policy Forum to reduce barriers to trade and investment with the goal of doubling bilateral trade in three years;
3. Agreeing to advance mutually beneficial bilateral trade and investment flows by holding a high-level public-private investment summit in 2006, continuing efforts to facilitate and promote foreign direct investment and eliminate impediments to it, and enhancing bilateral consultations on various issues including tariff and non-tariff barriers to trade in goods and services, and preventing the illicit use of the financial system.

(2) Sought to expand cooperation in agriculture by:—

1. Launching the Knowledge Initiative on

Agriculture with a three-year financial commitment to link our universities, technical institutions, and businesses to support agriculture education, joint research, and capacity building projects including in the area of biotechnology.

2. Endorsing an agreed workplan to promote bilateral trade in agriculture through agreements that: lay out a path to open the U.S. market to Indian mangoes, recognize India as having the authority to certify that shipments of Indian products to the United States meet USDA organic standards, and provide for discussions on current regulations affecting trade in fresh fruits and vegetables, poultry and dairy, and almonds.

(3) Reaffirmed their shared commitment to completing the WTO Doha Development Agenda (DDA) before the end of 2006, and agreed to work together to help achieve this outcome.

#### **For Energy Security and a Clean Environment**

(1) Welcomed the successful completion of discussions on India's separation plan and looked forward to the full implementation of the commitments in the July 18, 2005 Joint Statement on nuclear cooperation. This historic accomplishment will permit our countries to move forward towards our common objective of full civil nuclear energy cooperation between India and the United States and between India and the international community as a whole.

(2) Welcomed the participation of India in the ITER initiative on fusion energy as an important further step towards the common goal of full nuclear energy cooperation.

(3) Agreed on India's participation in Future Gen, an international public-private partnership to develop new, commercially viable technology for a clean coal near-zero emission power project. India will contribute funding to the project and participate in the Government Steering Committee of this initiative.

- (4) Welcomed the creation of the Asia Pacific

Partnership on Clean Development and Climate, which will enable India and the U.S. to work together with other countries in the region to pursue sustainable development and meet increased energy needs while addressing concerns of energy security and climate change. The Partnership will collaborate to promote the development, diffusion, deployment and transfer of cleaner, cost-effective and more efficient technologies and practices.

(5) Welcomed India's interest in the Integrated Ocean Drilling Program, an international marine research endeavour that will contribute to long-term energy solutions such as gas hydrates.

(6) Noting the position cooperation under the Indo-U.S. Energy Dialogue, highlighted plans to hold joint conferences on topics such as energy efficiency and natural gas, to conduct study missions on renewable energy, to establish a clearing house in India for coal-bed methane/coal-mine methane, and to exchange energy market information.

#### **For Innovation and the Knowledge Economy**

(1) Emphasizing the importance of knowledge partnerships, announced the establishment of a Bi-National Science and Technology Commission which the U.S. and India will co-fund. It will generate collaborative partnerships in science and technology and promote industrial research and development.

(2) Agreed that the United States and India would work together to promote innovation, creativity and technological advancement by providing a vibrant intellectual property rights regime, and to cooperate in the field of intellectual property rights to include capacity building activities, human resource development and public awareness programs.

(3) Agreed to continue exploring further cooperation in civil space, including areas such as space exploration, satellite navigation, and earth science. The United States and India committed to move forward with agreements that will permit the launch of U.S. satellites and satellites containing U.S. components by Indian space launch vehicles, opening up new opportunities for commercial space cooperation between the two countries.

(4) Welcomed the inclusion of two U.S. instruments

in the Indian lunar mission Chandrayaan-1. They noted that memoranda of understanding to be signed by ISRO and NASA would be significant steps forward in this area.

(5) Welcomed the U.S. Department of Commerce's plan to create a license exception for items that would otherwise require an export license to end-users in India engaged solely in civilian activities.

#### **For Global Safety and Security**

(1) Noted the enhanced counter-terrorism cooperation between the two countries and stressed that terrorism is a global scourge that must be fought and rooted out in every part of the world.

(2) Welcomed the increased cooperation between the United States and India in the defense area, since the New Framework for the U.S. India Defence Relationship was signed on June 28, 2005, as evidenced by successful joint exercises, expanded defence cooperation and information sharing, and greater opportunities to jointly develop technologies and address security and humanitarian issues.

(3) Reaffirmed their commitment to the protection of the free flow of commerce and to the safety of navigation, and agreed to the conclusion of a Maritime Cooperation Framework to enhance security in the maritime domain, to prevent piracy and other transnational crimes at sea, carry out search and rescue operations, combat marine pollution, respond to natural disasters, address emergent threats and enhance cooperative capabilities, including through logistics support. Both sides are working to finalize a Logistics Support Agreement at the earliest.

(4) Welcomed India's intention to join the Container Security Initiative aimed at making global maritime trade and infrastructure more secure and reducing the risk of shipping containers being used to conceal weapons of mass destruction.

(5) Reiterated their commitment to international efforts to prevent the proliferation of weapons of mass destruction.

(6) Building on the July 2005 Disaster Relief Initiative, noted the important disaster management

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cooperation and their improved capabilities to respond to disaster situations.

(7) Recognized the importance of capacity building in cyber security and greater cooperation to secure their growing electronic interdependencies, including to protect electronic transactions and critical infrastructure from cybercrime, terrorism and other malicious threats.

### **Deepening Democracy and Meeting International Challenges**

(1) Recalled their joint launch of the UN Democracy Fund in September 2005 and offered the experience and expertise of both Governments for capacity building, training and exchanges to third countries that request such assistance to strengthen democratic institutions.

(2) Welcomed the decision of India and the United States to designate a representative to the Government Advisory Board of the International Centre for Democratic Transition (ICDT) located in Budapest to facilitate cooperative activities with ICDT.

(3) Agreed that the Virtual Coordination and Information Centres set up in September 2005 should be further strengthened and a bilateral meeting aimed at developing a practical programme for utilization of its services be held soon.

(4) Expressed satisfaction at the expedited USFDA drug approval processes that strengthen the combat against HIV/AIDS at the global level and encourage greater corporate participation to meet this challenge, including the establishment of the Indo-U.S. Corporate Fund for HIV/AIDS.

(5) Agreed to expand bilateral efforts and continue cooperation in the area of medical research and strengthen technical capacity in food and drug regulation in India as well as address the concern on avian influenza, including agreement to reach out to the private sector, develop regional communications strategies, and plan an in-region containment and response exercise. The President welcomed India's offer to host the International Partnership on Avian and Pandemic Influenza meeting in 2007.

(6) Welcomed India's membership in the Coalition Against Wildlife Trafficking, a partnership through which we will collaborate in the fight against illegal trade in wildlife and wildlife parts; we also welcome the opportunity to strengthen longstanding work together on the conservation of wildlife through cooperation on park management and ecotourism.

President Bush thanked Prime Minister Singh and the people of India for the warmth of their reception and the generosity of their hospitality.

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

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 longterm implications of increasing pressure on hydrocarbon resources and rising oil prices. These developments led to the announcement in April 2005 of an Indo-US 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 US and other partners. India also accepted the US 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 US 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 US, 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 US) offered to India in the civilian sector should, firstly, not be diverted

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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 consequently, 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 and 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 (199.9% 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)
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	No. 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 100 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 third 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 and 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

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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 US, 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 and 2, RAPS 1 and 2) and in addition KK 1 and 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 and 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
- (b) Variable Energy Cyclotron Centre
- (c) Saha Institute of Nuclear Physics
- (d) Institute for Plasma Research
- (e) Institute of Mathematics Sciences
- (f) Institute of Physics
- (g) Tata Memorial Centre
- (h) Board of Radiation and Isotope Technology
- (i) 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.

PROF. VIJAY KUMAR MALHOTRA (South Delhi): Sir, he has said that the Separation Plan will be placed before the American Congress. But he is not placing it before us. It is not being placed before us but it will be placed before the American Congress....(Interruptions) If it is being placed before the American Congress, why is he not taking the Indian Parliament into confidence?... (Interruptions)

MR. SPEAKER: It is placed on the Table of the House.

...(Interruptions)

PROF. VIJAY KUMAR MALHOTRA: Only the statement is laid. He has said that it cannot be done....(Interruptions)

MR. SPEAKER: He has mentioned about the Separation Plan.

...(Interruptions)

PROF. VIJAY KUMAR MALHOTRA: He has said that it will not be done at the moment because it is yet to be negotiated. It cannot be placed here. When it is going to be placed before the American Congress, why should it not be placed before us?... (Interruptions)

SHRI BASU DEB ACHARIA (Bankura): We want a discussion....(Interruptions)

MR. SPEAKER: This will be discussed, no doubt. You give notice, we shall certainly discuss it. This is an important matter and obviously it will be discussed.

...(Interruptions)

SHRI GURUDAS DASGUPTA (Panskura): Sir, I would like the Government to get the approval of the House particularly the Parliament with regard to the Agreement....(Interruptions)