Indo US Nuclear Treaty, its history and implications

By

Dr.M.R.Iyer
(Former Head, Radiation Safety Systems Division, BARC &
Former IAEA Safeguards Inspector and Instrument specialist)

1. Atomic Energy in India

In India the atomic energy operations started with the setting up of the one MW swimming pool research reactor Apsara in August 1956. Incidentally we are celebrating the golden jubilee of Apsara this month (August 4, 2006) and the author has the satisfaction of being involved with some aspects of its operation since 1958. The reactor was designed and constructed by Indian engineers and scientists at a time when the technological capability to design and operate nuclear reactors was confined to just 4 countries. Even China had not started its nuclear operations. In India that was followed up by setting up the 40 MWth CIRUS research reactor with Canadian assistance in 1960, a fuel reprocessing plant of Indian design for separating plutonium from irradiated nuclear fuels in 1965 and the first twin reactor nuclear power station at Tarapore with US assistance in 1969. Subsequently the first of the pressurized heavy water power reactors of 235 MWe was set up with Canadian assistance in Kota, Rajasthan in 1973 and construction of a second unit was started at the same site. India constructed a major research reactor of 100 MW for isotope and plutonium production in 1985 in BARC. In 1953 when the US President Eisenhower initiated declassification of scientific literature in the post war era, Dr. Bhabha of India was selected as the President of the first Geneva conference in 1955. Thus Indian leadership in the field of atomic energy was internationally accepted from those initial days. India had withheld demonstrating its capability for testing a nuclear explosive for a long time till 1974 when it carried out its first nuclear testing at Pokhran in Rajasthan. As a consequence of this all International co operation with India was terminated by western powers.

2. The IAEA and International Nuclear Safeguards

The International Atomic Energy Agency (IAEA) was originally formed in

1957 under the United Nations to promote nuclear energy in the aftermath of the Eisenhower's "Atoms for Peace" program and the Geneva conference. India under the leadership of Dr. Homi Bhabha was one of the initiators of forming IAEA. It is told that it was Dr. Bhabha who was responsible for locating the head quarters of the IAEA in Vienna. The mandate of the IAEA was changed to include preventing proliferation of nuclear weapons in 1970 and the Safeguards operations for inspection of nuclear facilities in countries under a Non Proliferation Treaty (NPT) was started. The four weapons powers were exempt from the ambit of this treaty and China was included as the 5th weapon power later. India from the beginning refused to sign this treaty which was prima facie discriminatory in nature in that it allowed the 5 weapon powers to proliferate vertically in acquiring nuclear weapons, but enforced intense inspection procedures by IAEA in the non weapon countries most of which became signatory to NPT with the exception of India and a few countries. India refrained from signing this treaty at the expense of being denied of international co-operation and availability of nuclear related materials and hardware. India however continued to develop all aspects of nuclear energy and was very successful in its indigenous efforts and became the sixth country to have a comprehensive capability on the complete nuclear fuel cycle. It developed its own version of the 235 MW Pressurised Heavy Water nuclear power Reactor (PHWR) and later the 500 MW version of this and today there are about 16 reactors of this type operating in the country at 6 different sites. Another 6 of them are under advanced stages of construction. In order to utilize its vast resources of thorium India developed a 15 MWe fast breeder test reactor at Kalpakkam in 1985 and followed up by initiating work in setting up a full fledged 500 MWe fast rector. The fast reactors enable the abundantly available thorium in India to be converted to nuclear fuel and in principle will produce more fuel than it burns. This program is key to India since our uranium resources are scarce but the thorium resources which is used in fast rectors is perhaps the highest in the world. India thus became the fourth country to have a fast reactor development program. Thus India has grown to be an advanced nuclear power generating country in its own right. All these were developed by the sheer efforts of Indian engineers and scientists and using local resources in the aftermath of its isolation from the International nuclear community. This program can be described as an example of outstanding success for the Indian atomic energy department. In 1998 India decided to test a series of 5 nuclear weapons at its underground test site in Pokhran in Rajasthan with the intention of developing its own nuclear deterrent in the face of external threats from Pakistan and other countries. This again

immediately brought a flurry of protests and further sanctioning against India from western powers. However India continued to maintain its impeccable record on controlling nuclear proliferation as distinct from its neighbor which has a very questionable record on acquiring nuclear know-how by the backdoor.

3. Indo US Nuclear Treaty

The India-US nuclear treaty being discussed now should be viewed in the above background In July 2005 President Bush of USA during a visit of Indian Prime Minister Manmohan Singh initiated the Indo-USA nuclear deal. Under this, the broad understanding was that India will be allowed to keep its nuclear weapons deterrent developing capability but has to bring its civilian nuclear reactors under the nuclear safeguards and the flood gates of international co operation in the field of nuclear energy will be opened up. United States even named India as its future strategic partner leaving behind its Pakistan centered policy of the cold war days. All looked bright since the Indian technological capability was the best, only it was under strain due to the embargo on availability of nuclear material and hardware from abroad particularly in the light of its limited uranium resources. India was obliged to separate its strategetic and civilian nuclear programs and installations for this purpose. This was followed by further discussions and signing of the agreement during visit of President Bush to India in March 2006 after a flurry of diplomatic bargaining and discussions.

The doubts in the minds of the Indian scientific community are essentially due to the fact that the features of safeguards agreement which India would be obliged to sign with IAEA could be very uncomfortable for the development of nuclear technology particularly the fast reactor technology. Further it may be aimed at limiting India developing its own perspective of nuclear deterrent. At one stage even the Chairman, AEC had to come out with a pubic statement with his discomfiture on the “changing of the goal posts” by USA. Though initially the understanding was that India would be able to choose as to what institutions it want to put under the civilian program and what to keep as strategetic facilities during the discussions in Delhi in March 2006, the US was making demands as to what these should be, which was quite disturbing. Only some hard bargaining by India kept the fast reactor program outside the scope of safeguards for the time being. That the Indian bargain was successful was essentially because the President Bush considered the signing of the treaty to be of utmost interest to USA.

4. The US-India Nuclear Cooperation Act 2006 before the US Senate

The bill ***"United States and India Nuclear Cooperation Promotion Act of 2006"*** is now being taken up for passing in the American senate stage by stage. During the amendments and discussions some disturbing developments in the form of putting more and more restraints on India are cropping up. One of the provisions in the bill is to ***" Achieve, at the earliest possible date, the conclusion and implementation of a treaty banning the production of fissile material for nuclear weapons"***. This is bound to limit Indian capability to determine its own definition of nuclear deterrent. India took objections and to be fair the American president assured that the "treaty- killer" amendments would be avoided since there is no question of changing the provisions of the signed agreement. The bill also contains some irrelevant clauses such as India should help USA in its campaign again Iran etc.) Quote from the bill ***"Secure India's full and active participation in United States efforts to dissuade, isolate, and, if necessary, sanction and contain Iran for its efforts to acquire weapons of mass destruction, including a nuclear weapons capability"***

Some amendments currently before the senate include a provision in which the American president will have to testify every year if in his opinion USA can continue with this treaty. Quote from the bill:

The President shall, not later than January 31, 2007, and not later than January 31 of each year thereafter, submit to theCommittee on International Relations of the House of Representatives and the Committee on Foreign Relations of the Senate a report on

(i) an estimate for the previous year of the amount of uranium mined in India; ii) the amount of such uranium that has likely been used or allocated for the production of nuclear explosive devices; (iii) the rate of production of

(I) fissile material for nuclear ex- plosive devices; and (II) nuclear explosive devices; and

(iv) an analysis as to whether imported uranium has affected such rate of production of nuclear explosive devices.

5. What the Bill being considered by USA implies

It is clear that these provisions are contrary to what was agreed upon in the Bush-Manmohan Singh agreement and are bound to put a restraint on the country deciding its own nuclear deterrent capability. Further declaring defense related information such as how many nuclear bombs you make to another country is unheard of in any other international agreements. No wonder Dr Sethna, former Chairman AEC remarked recently that "it was better for the government to sign the Non Proliferation Treaty than this agreement. He elaborated, "well if we have to choose between two evils, then it is better to go with the lesser evil (the NPT)".

America has a history of walking back on its international treaties such as its agreement for supply of fuel to the Tarapur rector during its life time in 1965 which was unilaterally broken by USA in 1975 and India was forced to turn to other quarters for the fuel. With this in the background it is clear that the US is powerful to go back in its agreements and in future it can deny India of the fuel under the treaty for the civilian nuclear power stations after placing them under international safeguards inspection by IAEA. The separation of civilian and strategic facilities in the Indian atomic energy program is in itself very complicated since the two are intertwined under the way in which these have evolved. If some vital facility such as BRIT, the isotope production facility of DAE (Dept. of Atomic Energy) under safeguards would have to depend on its supply of radio-isotopes to reactors under a non-safeguarded strategic facility, it can lead to uncomfortable complications with the IAEA at a future date. Similarly an R&D institution like TIFR coming under safeguards may face unnecessary procedural problems if it undertakes some fundamental research which may have some relevance for some strategetic applications. The author with his earlier involvement with the Department of Safeguards of IAEA can appreciate how intrusive and uncomfortable the "Additional Protocols" of a Safeguard agreement could be! Further, under the current mandate of the IAEA which is an International body with its mandate and statute from UN and its multi-national governing body, there is no provision to consider India as a special case having both safeguarded civilian installations and un-safeguarded weapon related institutions. This type of treatment under its mandate is reserved only the 5 nuclear weapon states. How practical this will be is to be seen when India tries to hammer a safeguard agreement with IAEA which is an obligation under the Indo USA treaty. ***Under the bill the President has to ensure that "India and the IAEA have concluded an agreement requiring the application of IAEA safeguards in perpetuity in accordance with IAEA***

standards, principles, and practices" (quote from the bill)

Leaders of the Indian scientific community like Dr. P.K.Iyengar, Dr.H.N.Sethna, and Dr. A.N.Prasad have serious reservations about the implications of the treaty. The doubt is that USA is very keen to have this treaty with its own axe to grind and not because it is interested in making India generate more electric power using nuclear energy. The interest of USA is perhaps to have a limited control over Indian atomic energy program since it is certain that India will never sign the present NPT agreement which will debar it from having a weapons program. So why not have some limited control over it and later on perhaps spread its fangs to further areas. Or it is possible that USA want to project India as its balancing allay in Asia against China as a long term objective due to their suspicion of China. It is very difficult to assess the real intentions of USA in this.

Thus there are benefits from this treaty in that it will help India to expand its nuclear power production with import of uranium which is limited in India and access to nuclear hardware and knowhow. But this is bound to be applicabale only to safeguarded activites. There are other aspects about which we have to guard against. To complicate matters the treaty is being discussed and voted at various forums of the US senate but there is no serious discussion on this in our parliament. Of more global concern is the fact that under the Indian parliamentary system bilateral agreements need not come before parliament for approval. Most of the information we get is from the senate hearings in USA. The government is no doubt believes that signing up of co-operation India can gain as it gained from opening up of other sectors like IT etc., but in this area there seem to be wheels within wheels. And India has to put its foot down on amendments which as President Bush himself termed as "treaty breaking" with long term implications. In any case a hard bargaining is required keeping in view the long term interests of the country.