

"Identifying a civilian nuclear facility is India's decision"

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Under the nuclear agreement with the United States, "what is going to be identified as a civilian facility is going to be an Indian decision ... taken at appropriate points of time," says Anil Kakodkar, Chairman of the Atomic Energy Commission and Secretary, Department of Atomic Energy. In an interview, Dr. Kakodkar reiterates that development programmes will not be put under safeguards. Excerpts:



Anil Kakodkar... no compromises. — Photo: S.R. Raghunathan.

Why was the agreement sprung secretly on the country? There was no debate on it. The nuclear issue relates to India's security and sovereignty. There was a debate even on the issue of introduction of colour television.

Anil Kakodkar: No. It is not like that... It is consistent with the policies we have been holding all along. Our policy is that we want to conduct our R and D [research and development] and protect our security interests based on our own autonomous decisions. That still stands. There is no major change.

What are the implications of the separation of civilian from military nuclear facilities in India as envisaged in the India-U.S. Joint Statement? How will it protect our security interests and autonomous decision-making?

The Joint Statement is actually a framework for cooperation in civilian nuclear power. The Joint Statement calls it a full cooperation in civilian nuclear power. It also says that India is a responsible country with advanced nuclear technology and that it will have the

same benefits and advantages as other countries with advanced nuclear technology. The point is whatever development we wish to carry out, we will be able to carry out. There is no hold on that.

What are the implications of the separation of civilian from military nuclear facilities?

First of all, this is going to be a reciprocal arrangement. The second thing is that while there is a recognition that we are a responsible country with advanced nuclear technology, we also said that we would assume the same obligations and responsibilities as other leading countries with advanced nuclear technology such as the U.S. So it is a totally non-discriminatory arrangement. It is a reciprocal arrangement where we expect that restrictions and embargoes on nuclear technology will get dismantled for cooperation in civilian nuclear power technology. That civilian part is not difficult. We have always been saying that anything coming from outside — external cooperation — will be put under facilities-specific safeguards.

What we are saying now is that the determination of what is going to be identified as a civilian nuclear facility is going to be an Indian decision. It is going to be a decision taken at appropriate points of time. That determination will certainly take into account all our national needs in terms of security, development, and R&D. So there should be no impact on that part. Whatever we determine as civilian, we will put under the IAEA [International Atomic Energy Agency] safeguards. That will be done in a voluntary manner. Nuclear weapon states do place their civilian facilities under the voluntary safeguards arrangement of the IAEA. We will do the same.

A.N. Prasad, former Director, Bhabha Atomic Research Centre (BARC) says the costs will be too prohibitive for India to have dedicated reactors for civilian and military purposes.

Certainly, that also will be a factor in identifying what is a civilian. If there is an implication on the strategic side, then we will not identify it as civilian. Only that which is clearly of no national security significance, only that part will be civilian. To that extent, there is no compromise.

According to Dr. Prasad, India has only a minimum credible nuclear deterrent and so the cost of segregation of civilian and military facilities will be prohibitive.

This does not imply capping of the programme. This in no way implies capping of the programme.

Former Prime Minister Atal Bihari Vajpayee and his National Security Adviser Brajesh Mishra have said segregation would lead to capping.

Here, the Prime Minister has said [Dr. Kakodkar reads out from Dr. Manmohan Singh's suo motu statement in Parliament on July 29, 2005] "the Government will not allow any fissile material shortages or any other material limitations on our strategic programmes in order to meet current or future requirements. The defence and security interests of our country are our highest priority and will continue to remain so."

Can we afford to have separate civilian and military facilities in the nuclear field?

What I am saying is this: in identifying civilian nuclear facilities, we have to determine that they are of no national security significance. We will do this in a phased manner. It is not a one-time determination. It will be determined at different points of time, looking at the national requirements, which exist from time to time. The point I am making is that this does not put any limitation on our ability to meet the national security needs.

Will putting our civilian nuclear facilities under safeguards cap our nuclear weapons programme because the spent uranium can no longer be enriched for making bombs?

I am telling you it is not there. The important point to recognise is that our energy requirements are very large. We have a three-stage nuclear power programme. In that, we have said that based on the natural uranium available in the country, we can support 10,000 MWe of Pressurised Heavy Water Reactors (PHWRs). Beyond that, we will continue to grow on the basis of Fast Breeder Reactors. Beyond that, we will pick up thorium utilisation. This is our three-stage programme and it will continue as per plans.

In the light of the fact that our national energy requirements are very large, we have been looking at external inputs as additionalities. If we can do that, the rate at which we can add nuclear power will be high. On that there was a constraint because of the nuclear technology control regime. If that constraint gets removed, and we are able to access both nuclear fuel and nuclear reactors from outside, I think we will gain a lot on the energy front.

For example, if I get natural uranium in plenty from outside, then we can construct more PHWRs within the country, for which we have the technology. You can visualise PHWR capacity much larger than 10,000 MWe.

This additional capacity, which can get sustained out of imported [natural uranium], no problem in putting under safeguards.

You can, in fact, think tomorrow of large parks of imported [Light Water] reactors and of PHWRs built in the country but fuelled by imported [natural] uranium. This could be an addition to our domestic programme, which is a three-stage programme. We have to go through a lot of development for this.

Will putting our civilian nuclear facilities under IAEA safeguards hamper our Fast Breeder Reactors programme?

No. How will it hamper?

Dr. Prasad has said that. Several people whom I talked to said the plutonium reprocessed from our PHWRs will come under safeguards and that the IAEA may not allow that plutonium to be used in the breeders.

We are not going to put any developmental programme under safeguards. Any research and development programme, we are not going to put under safeguards.

So the Prototype Fast Breeder Reactor (PFBR) under construction at Kalpakkam and the Fast Breeder Reactors will not come under safeguards?

No. The PFBR will not come. The PFBR is a proto-type. Why should it go under safeguards? When technology becomes mature, it is a different story. The point is all these decisions will be taken at the appropriate time and there is no need to decide it today.

Will the Indira Gandhi Centre for Atomic Research (IGCAR) at Kalpakkam, which deals with breeder reactors, come under the safeguards?

IGCAR is an R and D centre.

Natural uranium for our PHWRs is in short supply. We are not able to mine uranium at Nalgonda in Andhra Pradesh and Domiasat in Meghalaya because of local opposition and political turbulence. What steps are you taking to speed up environmental clearance from the two States' Pollution Control Boards for starting the mines?

We are working hard on uranium mining and uranium production programmes. We are opening new mines. We are already working on a fairly massive programme at Banduhurang and Turamdih in Jharkhand. We are pursuing the issue with the Andhra Pradesh and Meghalaya Governments. These efforts will continue and there will be no slackening.

Besides the shortage of natural uranium, what are the constraints in reaching 10,000 MWe of nuclear power? We were supposed to reach it in 2000?

We said we would reach by 2012. That will happen.

Where was the need to say in the Joint Statement that India would continue its voluntary moratorium on nuclear testing?

Our voluntary moratorium is unilateral. We declared it on our own. It is part of our national decision. We have to secure our national interests and we are quite confident of doing that, based on whatever we have done and whatever we are doing.

Earlier, it was a unilateral decision and we could break it any time. It has become binding now because it is there in the Joint Statement.

We are a responsible country. We are quite clear about the path we want to follow.

What kind of LWRs will we import? Will they be turnkey or will the Nuclear Power Corporation of India Limited build them as it is doing in the case of the two Russian VVER-1000 reactors under construction at Koodankulam in Tamil Nadu?

We will continue our domestic nuclear power programme. We will look at external inputs as additionalities. The configuration of this additionality will be determined by the financial package. It depends on the financial engineering of the project, how much value addition will take place in India and elsewhere. But the important point is that this is an additionality. We have to decide the other details on a case-by-case basis.

The electricity generated from the fourth nuclear power reactor at Tarapur will be sold at Rs.2.80 a unit. Isn't it on the high side because it is a base load power station and it is assured of offtake? Even power from Dabhol will be sold at Rs.2.50.

Tarapur price is quite competitive. It will become more and more competitive in the years ahead. Nuclear power [tariff] is not subject so much to escalation whereas the variable costs are higher in other forms of power stations, that is, fossil fuel-fired power stations. They are subject to a lot of escalating trends. Tarapur 1 and 2 is the cheapest non-hydel power available in the country today. Take my word, in the years to come, the same thing will be true of all nuclear power stations.

The Joint Statement says the United States will consult its partners on India's participation in the International Thermo-Nuclear Experimental Reactor (ITER) programme and the Generation IV International Forum. Is it not an assault on the nation's dignity and sovereignty? We are ahead of several countries in the breeder reactor, fusion, and thorium-utilisation programmes. We are going to build the Advanced Heavy Water Reactor (AHWR), which will use thorium as fuel.

I don't understand this at all. The AHWR is of indigenous design. It has all the advanced features of a safe power station and it is a system that generates energy out of thorium. The AHWR, of course, is our indigenous development. In the Generation IV International Forum, there are as many as six reactor types, which are under development.

They are different from the AHWR. They also represent an advancement in nuclear technology. We are a large country. We cannot take a restrictive view of technology. We have to look at technology in a comprehensive way.

If there are ten advanced countries participating in the Generation IV International Forum, it is good that India is also able to participate in it because we have the technological capability.

The same is true of the ITER. It is an international project with six partners. We have our own advanced capability in fusion technology as a result of the work done at the Institute of Plasma Research, Gandhinagar. It is only appropriate that we should be able to become a full partner in the ITER programme.

There is no logic in saying that this is an assault on our national dignity. On the other hand, this is a testimony not only to the enormous international stature and respect achieved by our scientists but also a recognition of their attainments. So how do you say things like that? I am surprised that somebody says things like that. Nobody will take us into this unless we are advanced, and we are advanced.