

French scientist advises caution on India's N-programme

Kalpakkam (Tamil Nadu) - An eminent French scientist Tuesday praised Indian scientific community for their 'Hanuman jump' in harnessing nuclear power but urged them to move with extreme caution on the fast breeder reactor programme.

George Vendryes, executive vice-president of the French Atomic Energy Commission and known as the father of the fast breeder technology, said: 'Move forward with utmost circumspection. Take no risks. Do not try to break Olympic records'.

Vendryes who had helped India acquire French breeder technology three decades ago, was speaking at a function here to commemorate 20 years of Indian successes in fast breeder test reactor (FBTR) technology.

India's breeder reactor technology is built on the model of the French reactor Rhapsodie.

It was in 1968 that India and France signed a nuclear technology cooperation where France (CEA) would teach India how to use sodium as a coolant.

India's latest indigenously breeder reactor, the Prototype Fast Breeder Reactor (PFBR), capable of producing 500 MWs of power, will be commissioned in 2010.

Defence Minister Pranab Mukherjee, participating in the event, lauded Indian scientists on their achievements and said: 'Production of nuclear power from PFBR will mark the beginning of an era of fast reactors in the country, which I hope, would propel us to a world leadership position in the area in years to come.'

He also praised the efforts of the Department of Atomic Energy (DAE), which 'has also contributed to the strategic sector through entirely indigenous efforts'.

India has 'achieved a unique and distinct milestone by reprocessing plutonium-rich carbide fuel after burn-up of 100,000 MW/tonne of fuel for the first time in the world', the minister noted, adding that the government's 'planned contribution of FBRs is more than 200Gwe by 2050'.

'Fast breeders (reactors) are also our connection to harnessing vast amount of thorium resources in the country,' the minister said. 'DAE is fully engaged in rigorous pursuit of the thorium-uranium fuel cycle technology of advanced reactors,' he added.

'Kalpakkam is a unique site in the nuclear world,' he said, housing in the same complex various types of reactors, producing fissile material both for power and for strategic purposes.

Vendryes lauded India's rapid technological progress, calling it a 'Hanuman jump from the IFTBR to PFBR'. He was referring to Hindu God Hanuman's super-human ability to jump over long distances and hurdles with ease.

'You take upon yourself an immense responsibility, with far-reaching consequences outside your country,' the French scientist cautioned the upbeat Indian establishment, emphasising how crucial the FBR technology was, and that India should not race ahead just to be a champion in the nuclear

technology race.

Anil Kakodkar, chairman, Atomic Energy Commission, listed the challenges ahead of the Indian nuclear industry, saying multiplication of FBRs to add megawatt capacity including developing larger reactors would prove to be difficult.

'Developing reactors and fuel cycles to run on metallic fuel so that capacity growth is through breeding' of fissile material would be a second great cha

llenge for India. Facilitating thorium utilisation technologies and thorium fast breeder reactors and development of liquid heavy metals too would be difficult, he added.

Kakodkar, however, said that India's indigenous breeder technology had a great future as 'fast breeder reactors are making a come-back worldwide'.

The minister said India will increase its nuclear technology cooperation with France.

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