

## **An Open Letter to Dr A.P.J. Kalam**

Sailendra Nath Ghosh

Dear Dr Kalam,

You are one of the most popular ex-Presidents of the Republic of India, the home of one-sixth of humanity. As such, you enjoy high respect at home and abroad. Your eagerness to ignite people's minds is universally acclaimed. Your interaction with the student community is a great source of inspiration for all of us.

You are a world class missile engineer. Your leadership of the defence research and development projects was excellent. For all these records, you are an iconic figure to millions of Indians. It pains us when you rush to express opinions on subjects in which you are not well-versed. Don't you realize that by so doing, you demean yourself?

A decade back, you rushed to support the idea of linking up the rivers of North India with those of South India in the simplistic belief that this would solve the problem of frequent floods in North India and the persistent drought problem of South India. You did not care to understand that the destructive floods in North India were due *not* to the super-abundance of water in the snow-fed rivers in North India but to (i) the raised riverbeds due to their high rate of siltation and (ii) the choking of floodplains due to unplanned constructions of roads and buildings and (iii) the deforestation of rivers' both banks. You did not care to observe that many riverine zones which become flood prone during the rainy season, become water-scarce during the dry season due to heavy withdrawals of water for irrigation. Nor did you care to know that while frugal irrigation for the purpose of supplying requisite quantities of moisture to growing crops is beneficial, over-irrigation, particularly in low-rainfall and high-evaporation zones is ruinous.

You, Sir, were born and brought up in South India. Therefore, you witnessed the region's changing landscape. Its craze, in recent times, for cultivation of high water-demanding crops like sugarcane, and the clamour for more and yet more expansion of irrigation has resulted in the soils' salination and depletion of micro-nutrients.

Diversion of waters from North India for further expansion of irrigation would have led to the desiccation of North India's rivers and to the salination of Indo-Gangetic and Brahmaputra Basins, as happened to the Aral Sea during the Soviet regime. Once the world's fourth largest lakes, it is now drying up and is a shrinking reservoir holding briny water. You also did not care to remember that wanton expansion of irrigation in the dry tropical zone of Mesopotamia rendered it saline and barren for 5000 years. The linking up project would have invited the same kind of fate for South India. In a word, you rushed to support a project which would have ruined the whole of India.

Besides, India would have lost very heavily in another way. Each of its rivers holds water which has its distinctive bio-chemical properties endowed with its peculiar curative qualities and nutrients to support different species of aquatic plants and animals. This huge bio-diversity would all have been lost in near-uniformity. This is why I, an unknown Indian, called this project a *millennial folly* and felt happy when it was given up.

Recently, you, Sir have rushed to certify the nuclear reactor at Kudankalam as "hundred per cent safe", May we know on what basis you said this? Have the Russians, the suppliers of reactors at Kundankulam, themselves been able to claim this? If they had ever dared to make this claim, they, together with the Americans, would not have been pressurizing the Government of India, to limit the supplier's liabilities to the absolute minimum – almost to nothingness - in the event of an accident. Has any reactor evaluation expert *any where* given *any* nuclear reactor such a certificate?

All independent reactor assessors in the world admit that *any* nuclear reactor carries with it the portent of a catastrophe, should any part of its complex equipments, starts malfunctioning. Can you or anybody give the guarantee about any machine that it will not fail or start malfunctioning?

Russia, the country which houses the company supplying nuclear reactors to Kudankulam, developed two models. Of these, the RBMK reactor fell a victim to meltdown at Chernobyl, causing the world's worst industrial disaster. True, Russia's "modern" model VVER has not been visited by any large disaster. But there is a report that in Bulgaria's Kozluduy nuclear site, in unit 4, the motor of a circulation pump tripped and three control rod assemblies got into "upper end position" due to electrical failure. Even after some corrective measures, 22 out of 61 control rod assemblies could not be moved by driving mechanisms. Thus, it came close to causing a disaster.

Will you please tell us what characteristics of the reactors installed at Kudankulam prompted you to give this high certificate?

Why do I refer to the nuclear reactor, developed by Russia alone? Even the US companies like Westinghouse are not sure of the safety of their reactors; and despite the Government of India's willingness to buy their reactors, are holding back their sales to this country because of India's new liability law which seeks to impose some very mild liabilities on suppliers. These companies know that grave risks are always there in operating nuclear reactors. It is strange that you are not aware of this. You are advising the people to acquiesce in this grave-risk misadventure at Kudankulam for now. Perhaps you will come up with support of the reactors that the Government of India intends to install in other States later.

Even those, who have a nodding acquaintance with nuclear fission cycle, know that its every step, including waste dump in the aftermath of the electricity generation, bristles with dangerous possibilities. Its each step deals with highly radioactive material.

A little human or machine error can lead to dangerous leaks or spills of radioactivity, contaminating surface as well as groundwater. Terrorist attacks by suicide squads on storage tanks of spent fuels can cause havoc. Should these not count in safety considerations?

When you proceed further to say that “nuclear energy is the ticket to modernity and prosperity”, you seem not to know (i) that a country like Germany, after having gone through the gamut of what you call the “modernity”, has decided to turn its back on nuclear power and to depend on renewable forms of energy to meet all its future needs, and (ii) that countries like Sweden, Spain, Belgium and the Netherlands have decided to follow suit. Have you tried to fathom why they have decided to shun nuclear fission-based electricity? A “modernity”, which has to be borne on the wings of a technology which spews death to large numbers of people in the event of a little human or machine error, is not worth any civilized existence.

Furthermore, when you say that “nuclear energy is the “ticket to modernity and to prosperity”, you tend to overlook that this vaunted modernity is alienating mankind more and more from Nature, leading humanity to dehumanizing existence, and driving all species of life to survival crisis. You also seem unaware of the limitless potential of renewable forms of energy which hold the key to sustainable and universally shared prosperity. You have been venerable in many respects. Hence I beseech you not to rush to such advocacies as militate against holistic perspectives and are foredoomed to failure.

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[sailendranathghosh@yahoo.com](mailto:sailendranathghosh@yahoo.com) / [sailendranathg@gmail.com](mailto:sailendranathg@gmail.com) and  
[sailendranathghosh.blogpost.com](http://sailendranathghosh.blogpost.com)