Heralding a new era in the spirit of Atoms for Peace

ndia - a nation blessed with a huge aspiring population - time immemorial has made no secret of its wish to take centre stage for safeguarding the interests of global commons. As a matter of policy, soon after becoming an independent nation, India crafted the policy of state-controlled planned economy with science and technology playing a pivotal role for ushering in an era of equitable national development.

"In a broad view of human history, it is possible to discern three great epochs. The first is marked by the emergence of the early civilizations....., the second by the industrial revolution ... and the third by the discovery of atomic energy and the dawn of the atomic age... Each epoch marks a change in the energy pattern of society," Dr. Homi J. Bhabha said in his presidential address to the maiden UN Conference on Peaceful Uses of Atomic Energy in Geneva, 1955.

Around the dawn of the new century, India proactively demonstrated its nuclear technology prowess, which characterised its true aspiration to position itself as an equal and responsible partner in transforming the course of mankind towards shared prosperity and peaceful coexistence.

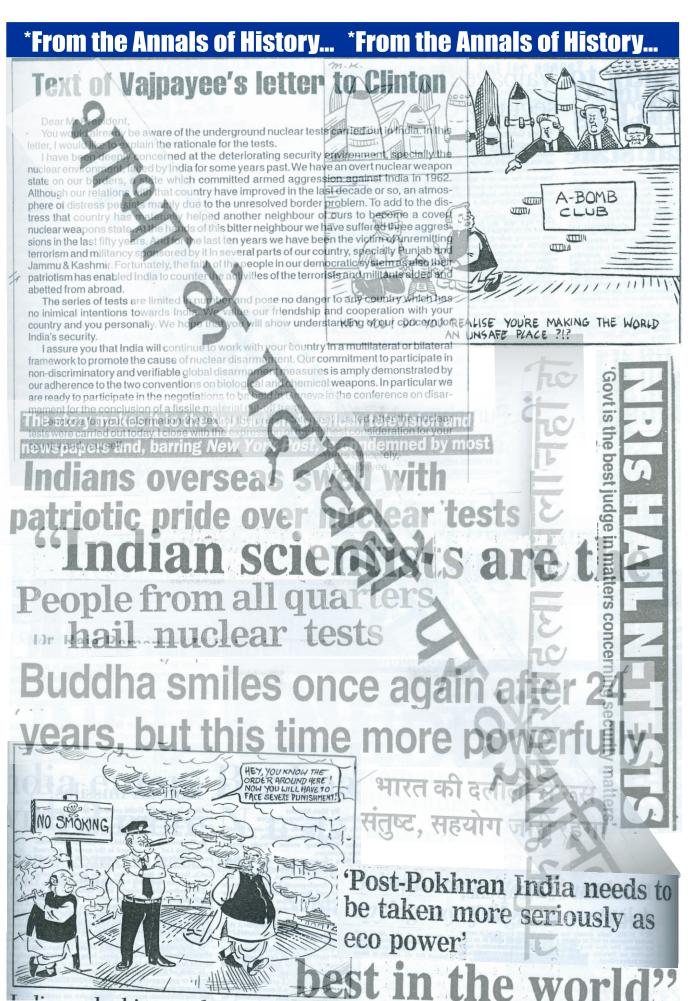
The series of nuclear tests conducted on May 11th and 13th in 1998, under the Operation codenamed 'Shakti,' was a testament to India's growing stature as a global power having advanced scientific and technological knowhow. Decades of restrictions imposed on the country over sharing of nuclear technologies did not deter its forward march albeit provided necessary impetus for achieving greater indigenization in wide spectrum of sophisticated technologies.

Countries which initially stood in disagreement over India's new coveted status, soon acknowledged the country's uncompromisingly strong nuclear non proliferation record to strike an "enduring" relationship. The diplomatic efforts that followed soon after the successful nuclear tests played a positive role in resetting India's relationship with the technologically superior West.

Years of painstaking efforts by nuclear energy fraternity amid difficult conditions, finally paved way for forging new partnerships with the West for broad based tech sharing and co-development. India is now an active member of all major international bodies that work to address non proliferation of sensitive technologies having military applications, such as the Missile Technology Control Regime (MTCR), the Wassenaar Arrangement, and the Australia Group. It secured a country-specific waiver from the Nuclear Suppliers Group (NSG) in 2008.

India's science and technology landscape has clocked many unique feats in the last more than 25 years. New reactors coming up in fleet construction mode in the next decade-and-a-half period with the active involvement of private sector would ensure significant expansion in nuclear energy capacity generation within the country. The incremental growth in capacity would mostly come from indigenously developed 700 MWe capacity pressurized heavy water type reactors (PHWRs).

The Bhabha Atomic Research Centre (BARC), through its strong multidisciplinary R&D culture, continues to play a pivotal role in the expansion of nuclear energy and allied activities in the country. This issue of newsletter presents newer outcomes from a range of R&D works in BARC. We take this opportunity to thank everyone for their committed efforts that contributed positively to the preparation and timely release of this issue of newsletter.



Courtesy of "The Asian Age, The Financial Express, The Indian Express, The Times of India, Navbharat Times (Hindi) and The Observe



India considers technology as a tool of the nation's progress, not a means to assert its dominance*.

*Prime Minister of India Shri Narendra Modi said during his address on the occasion of National Technology Day 2023