

FOUNDER'S DAY-2009

ADDRESS BY

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&  
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Dear Colleagues,

This Founder's Day is a special occasion, as it marks the 100<sup>th</sup> birth anniversary of our founder Dr. Homi Jehangir Bhabha. The year that has gone by was full of several events to commemorate the birth centenary year. Inauguration of the Centenary Year by our Prime Minister, Dr. Manmohan Singh on this day last year, the major international conference held in Delhi a month ago on 'Peaceful Uses of Atomic Energy', a theme on which Dr. Bhabha himself had chaired the First Geneva Conference in 1955, apart from many other events have not only allowed us to pay our respect to the vision and memory of Dr. Bhabha and to deliberate on different aspects of our atomic energy programme, but also in many ways have enabled all of us to get ready for an accelerated implementation of the programme and fulfill Dr. Bhabha's vision in the shortest possible time.

I have been placing before all of you new opportunities through synergy between our domestic three stage programme and international civil nuclear cooperation. A broad based group is refining the way forward for our nuclear power programme. An important feature of the group is involvement of a significant number of experts in almost all related fields who would be around to see the implementation through. It seems that based on technologies that are available, it is possible to add a capacity of around 59,000 MW of electricity generation through PHWRs, LWRs, FBRs and AHWR by the year 2032. The group has defined various steps that we need to take in DAE and is now working out the related actions that are necessary in the industrial domain outside DAE. In the medium term, the group has emphasized on development of technologies related to metallic fuel based FBRs and their fuel cycle with clear identification of R&D tasks that need to be completed along with their respective time frames. While inaugurating the Delhi Conference, our Prime Minister has set up a goal of 470,000 MWe by the year 2050. This goal is well within the range of possible scenarios that have been evaluated by the group. The group has also brought out the technologies that need to be developed to fully exploit our vast thorium resources and fusion energy in the long term.

Coming to some of the recent developments, we now have the approval for two 700 MWe units of PHWRs each to be set up at Kakrapar and Rawatbhata. Government has also given approval for two new sites for setting up a total of six 700 MWe PHWRs and three new sites for setting up parks of Light Water Reactors in addition to sites at Kudandulam and Jaitapur that were approved earlier. Work on expansion of uranium mill at Jaduguda has been completed. While expansion of the mill at Turamdih, construction of mine at Mohuldih and mine and mill at Tummalapalli is progressing, we expect soon to start additional uranium projects in Karnataka, Meghalaya and Andhra Pradesh. With progressive improvement in availability of uranium, we have already started seeing increase in the capacity factor of our reactors and it should be possible to start new units at RAPP-5 & 6 and Kaiga-4 in the next few months. Construction of Kudankulam units 1 & 2 and PFBR continues to make progress.

Development of air borne Time Domain Electro-Magnetic (TDEM) system by IGCAR and BARC is showing promising results and is expected to be available for field deployment soon. TDEM is an important tool to detect deep seated deposits that do not have any surface manifestations and has added a new dimension to AMD's uranium exploration efforts.

Superconducting Cyclotron at VECC has accelerated the beam internally to the full potential and the facility would become available for experiments once the beam has been extracted out.

An important milestone was crossed when INS Arihant was launched. This was a proud moment demonstrating indigenous capability in building compact nuclear power plant meeting exacting and difficult to realise specifications. The land based version at Kalpakkam that was operational earlier continues to perform well. This is also a demonstration of our domestic capability in building indigenous PWR systems for electricity production.

Apart from electricity, our programmes have led to several societal benefits in the area of food and agriculture, human and animal health, urban and rural waste management, safe drinking water and several industrial applications. This indeed enables us to carry our programme forward with a human face. This, apart from work in the laboratories, requires engaging various segments of society and other stake holders to facilitate translation of laboratory development to the society. I am glad that deployment of developments like Bhabhatron Tele-therapy system, Nisargaruna Waste bio-digester and Akruiti frame work is growing fast and making their own distinctive impact on the society.

It is becoming increasingly clear that we are pursuing several activities that are either contemporary or in fact ahead of rest of the world in some cases. The driving force for this lies in the imperatives of our programme. Since it is necessary for us to move forward on our path, notwithstanding the existence or otherwise of similar developments elsewhere, strong linkage between research activities in our institutions and development of applications for use in our programme is of crucial importance. We have therefore been emphasising Ph.D level research on the interface of basic research and related technology under HBNI. Soon we expect a basket of research topics, particularly in areas of gaps in our understanding or our capability to be available to scholars to enable them to choose their research topics in areas of importance to the programme.

With an eye on the future, we are expanding our research infrastructure. New campus of BARC, with an area much larger than Trombay campus, near Vishakhapatnam; TIFR's new campus at Hyderabad, a new campus for VECC and SINP in Kolkata are some major examples. Expansion of human resource is another area that has engaged our attention. We now have the possibility to tap the best talents at different levels beginning with 10+2 level through DAE-MU-CBS and NISER, B.Sc level through NIUS, BE/B.Tech, M.Sc/M.Tech level through BARC Training School and through HBNI Ph.D programme and post Ph.D level

through KSKRA scheme. Mentoring these young people and sustaining an ambience around them that enhances their creativity and application of mind to excel in new emerging areas should be our responsibility. We owe this to our programme and hence to our nation.

Friends, this is the last time I am addressing you from this podium. I wish to thank all of you for your strong commitment to the programme and your support to the efforts to sail through the fuel supply crisis in a manner that allowed the programme to move fast forward and meet the national needs and expectations of our people. That indeed has been the task set up for us by Dr. Bhabha. Let us ensure that the way forward defined by the group is followed through with dedication and respect for time lines. Let us resolve to do so and realise the Bhabha dream before it is too late. That will be a fitting homage to the memory of Dr. Homi Bhabha on his 100<sup>th</sup> birthday.

Thank you.

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