



72nd Independence Day
15th August 2018
DAE Mumbai

Independence Day 2018 Address by the Secretary, DAE at OYC, Mumbai

Good morning to all of you, my dear colleagues, ladies and gentlemen. Today we are completing 71 years of Independence. While we celebrate this journey of 71 years, this is the day to pay homage to our freedom-fighters for their sacrifice, which made it possible for us to hoist the national flag in our motherland. 71 years is a long journey and it is important for us to evaluate our performance in this period.

The Department of Atomic Energy established in 1954 at Trombay has also come a long way in the arena of strategic, power and nuclear applications.

I am happy to present to you a glimpse of our achievements in the recent past and talk to you about the way ahead of us.

In the power sector, our notable achievement was one of the longest run of reactor KGS-1 for 816 days. Similarly, RAPS-3, KGS-2, KGS-3 and MAPS-2 have also completed 709, 514, 517 and 407 days of continuous run. This was the story 9 days ago. The plants continue to run. So we have to add more days in the above. KGS-1, tomorrow with 826 days in its bag will get third rank in the World.

I am glad to inform that the excavation work and equipment ordering at GHAVP-1&2 has been started.

Industrial Way Forward Agreement for the establishment of 6 nuclear power plants with EPR French technology in Jaitapur was signed. Tripartite Agreement between India, Russia and Bangladesh was signed at Moscow. Technical support is being provided to Bangladesh for establishing their Rooppur Plant. Our efforts towards involvement of Indian companies have resulted in winning one contract for construction of Rooppur Plant.

Discussion with Westinghouse for establishing six AP-1000 reactors at Kovvada site was continued.

Nuclear Fuel Complex has supplied zircaloy tubings for KAPS-2. After the completion of EMCCR activities the reactor is now getting ready for going into operation.



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Heavy Water Board has initiated the production of oxygen-18 used for PET scanning at Manuguru site.

Laser based system developed at RRCAT was used for cutting bellow lip joints for en masse coolant channel replacement at KAPS-1.

In the uranium sector, we have been able to get forest clearance for Jaduguda Plant and also environmental clearance for Musabani Plant for production of uranium from copper tailings at Jharkhand. These milestones will lead to a good rise in Uranium production in India.

AMD has now established availability of over 3 lac tons of U₃O₈ in the country.

Two smaller deposits have been established at Jahaj in Rajasthan and Kanchankayi in Karnataka. We are now concentrating on stepping up exploration activities.

In the health care sector, cancer treatment facilities are being developed in the country in the Hub and Spoke concept.

Homi Bhabha Cancer Hospital, a spoke located at Railway Hospital campus at Varanasi has become operational. 15 acres of land has been handed over to DAE by Bihar Government for construction of another hospital, a spoke for cancer care at Muzaffarpur.

Cancer Diagnosis System onco-diagnoscope developed at RRCAT, Indore was used in cancer screening camps organized by AIIMS, Jodhpur.

Team of scientists from Tata Memorial Centre have found mechanisms by which an inexpensive treatment can increase survival and cure in breast cancer.

BRIT has introduced four new radiopharmaceuticals for imaging neuroendocrine tumors, bone pain palliation treatment and treatment of liver.

BRIT has also supplied seven cesium-137 based blood irradiators to various hospitals.



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Bhabhatron Machine gifted to Kirgizstan by Government of India has become operational this year.

In the food preservation sector, MoUs have been signed for radiation processing plant at Visakhapatnam, Ahmedabad, Noida, Rewari and Ambernath.

In the water and waste management sector, sludge hygienisation plant coming up at Ahmedabad has been supplied with radiation source.

We are honored to receive the President of India at Trombay campus of BARC in May this year. He spoke about the achievements of our scientists over the last few decades and also inaugurated remotely the following facilities:

1. 150 KW x 2 Electron Beam Plasma Melter at NFC, Hyderabad.
2. Integrated Centre for Crisis Management at Trombay.
3. Metal Fuel Fabrication Facility at Kalpakkam.
4. Enriched BF₃ Gas Generation Facility at Heavy Water Plant, Talcher.
5. Multi Leaf Collimator System for Bhabhatron at ACTREC, Kharghar.
6. Dubraj Mutant variety of rice for the farmers of Chhattisgarh region.

In the mega science sector, approval for cost escalation was obtained for International Thermonuclear Experimental Reactor (ITER) project and this will help us in speeding up our work towards the in-kind supply.

Inter-Governmental Agreement was signed for Neutrino Physics Collaboration with Fermilab during the visit US Secretary of Energy to India during April this year. This has opened up the possibility of contributing to neutrino projects in each other country by in-kind contribution.



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Infrastructure works for state of art Facilities for Research in Experimental Nuclear Astro-Physics (FRENA) was completed at Saha Institute of Nuclear Physics. The facilities was inaugurated by Hon'ble Vice President of India, Shri M. Venkaih Naidu in July this year.

Scientists at IMSc discovered that words in all commonly used languages start with a far greater diversity of sounds as represented by letters or symbols in that language, but end with a restricted set of sounds, indicating an universal underlying feature of human cognitive phenomenon. This finding also helped confirm the archaeological observation that the Indus Valley Civilization inscriptions were written from right to left.

Homi Bhabha National Institute crossed the prestigious milestone of awarding 1000 Ph.D. and 1000 M. Tech. degrees. Till March 2018 they have awarded 1317 Ph.D. degrees 1060 M. Tech. degrees.

Design and development of main cavity magnet for nations first indigenous Gyrotron at Institute of Plasma Research was completed. Electron Beam was guided through tube and 125 kW RF power was successfully developed.

The "seeker" radar developed by ECIL and BARC, for terminal guidance of the BRAHMOS cruise missile, was successfully tested in a live trial, establishing a crucial high-end technology capability for Defence.

Last financial year, once again, our Public-Sector Undertakings and Industrial Units have performed exceptionally well. Let me tell you about their achievements.

NPCIL's profit of Rs.3367 crores was highest ever.

Heavy Water Board achieved second highest production.

Nuclear Fuel Complex achieved the production of 115% of their target.

Uranium Corporation of India Ltd. has also achieved the highest ever production.

Electronic Corporation of India Ltd. has achieved second highest production.



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Board of Radiation and Isotope Technology has achieved highest ever turnover.

Indian Rare Earth Ltd. has achieved highest ever profit.
Congratulations to all our PSUs and Industrial Units.

I compliment the units providing various services in the area of maintenance, administration and accounts, security, transport and others for having performed exceptionally well.

I am proud to announce that major refurbishment of Dhruva Reactor, which produces Radio-isotopes for the entire country was completed in compact time schedule of 65 days. Professional approach, systematic planning and efficient execution made it possible to take up the activities without disturbing the radio isotope delivery to the cancer hospitals in the country.

Nuclear Recycle Facilities continued to do exceptionally well both in R&D and Production activities.

IREL received the prestigious SCOPE Awards for “Excellence and Outstanding Contribution to the Public Sector Management - Special Institutional (Turnaround) Category 2016-17”.

I would also like to congratulate DCSEM for timely addressing waste management issues at Anushaktinagar colony.

Before I end, I must acknowledge DAE Secretariat at Mumbai and Delhi for their efforts in handling crucial issues in spite of roadblocks. This year was exceptional in this regard.

Thank you

Jai Hind
