

Government of India
Department of Atomic Energy

Year End Review 2018: Department of Atomic Energy

- Unit-1 of Kaiga Generating Station (KGS) has registered 941 days of continuous operation on December 10, 2018 surpassing the earlier world record of 940 days held by Heysham-2 Unit-8 (610 MWe AGR) of UK. This landmark has demonstrated that nation's capability in nuclear power generation technology of PHWR has fully matured. It evidences the excellence in design, construction, safety, quality and operation & maintenance practices of NPCIL.



Kaiga Generating Station 1 - 4

- Construction of Pressurised Heavy Water Reactors of 700 MWe capacity, coming up at Kakrapar, Gujarat, and Rajasthan, are now progressing well, and one reactor is expected to become critical by the end of 2018, and subsequently one reactor every year.



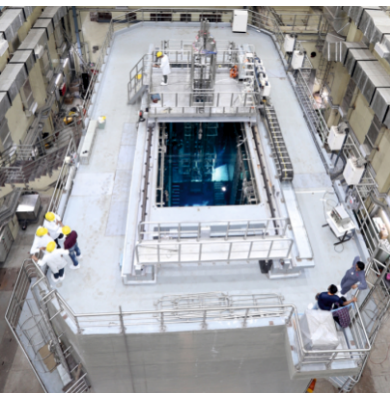
Kakrapar Atomic Power Station Units 1 & 2

- The Kakrapar Nuclear Power Station Unit – 2, Gujarat, resumed operations in September 2018, three and a half months ahead of schedule after completion of Renovation and Modernisation works encompassing En Masse Coolant Channel Replacement (EMCCR) and En Masse Feeder Replacement (EMFR) and other safety upgrades.

- In March 2018, the Fast Breeder Test Reactor, (FBTR) was operated at 30 MWt, a major milestone in its history, and its turbo generator was synchronized to the grid, delivering an electrical output of 6.1 Mwe



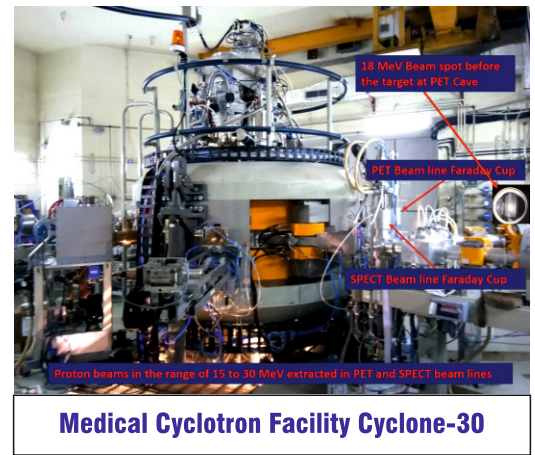
Fast Breeder Test Reactor, Kalpakkam



**APSARA-U POOL-TOP VIEW
FROM VIEWING GALLERY**

- APSARA(U) an upgraded swimming pool type reactor became operational at Trombay in September 2018. The reactor is designed to produce a large variety of isotopes and serve the nuclear physicists, material scientists and reactor designers providing state of art facilities. This technology can be shared with the new-comers in nuclear field.

- Cyclone-30, a medical cyclotron, the largest in India, delivered 30 MeV beam. This cyclotron is capable of meeting radioisotope needs for entire Eastern India and will also meet the requirements of Paladium 103 and Germanium 68 for the entire country. This facility will also have dedicated beam lines for research in material science and nuclear physics.



- Development of cost effective drugs for cancer with 21 Nos. radiopharmaceuticals for diagnosis and therapy and two radionuclide generators have been developed.

Keeping up with pace of enhancing our international cooperation a few agreements were signed:



- In the field of Neutrino Physics, DAE signed an inter - governmental collaboration agreement with Fermilab U.S.A, during the visit of US Secretary of Energy to India in April 2018.



- Industrial way forward agreement was signed between NPCIL, India and EDF of France in March 2018 for the establishment of six nuclear power reactors of EPR technology.



- Agreement signed between the Department of Atomic Energy and the Department of Natural Resources of Canada on Nuclear Science & Technology and Innovation in February 2018.



- MoU signed with VINATOM of Vietnam in March 2018 on training and capacity building.