

न्यूक्लियर पावर कॉर्पोरेशन ऑफ इंडिया लिमिटेड (भारत सरकार का उद्यम) NUCLEAR POWER CORPORATION OF INDIA LIMITED (A Govt. of India Enterprise) विक्रम साराभाई भवन मध्य मार्ग, अणुशक्तिनागर मुंबई-400094

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Outstanding Scientist
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PRESS RELEASE

December 17, 2023

KAPP-4 achieves First Criticality

The Unit 4 of Kakrapar Atomic Power Project (KAPP 4-700 MW) achieved the important milestone of Criticality (start of controlled fission chain reaction) for the first time today at 01:17 hrs. The criticality was achieved after meeting all the stipulations of the Atomic Energy Regulatory Board (AERB), which had issued clearance after a rigorous review of safety of the plant systems. KAPP-4 is the second in the series of sixteen indigenous Pressurised Heavy Water Reactors (PHWR) of 700 MW each being set up in the country.

The event was witnessed by Shri B.C.Pathak, CMD, NPCIL, who was present in the control room of the station with the site team. Officials at Headquarters witnessed the event through video link. Addressing the officials at the site and headquarters after the event, CMD NPCIL congratulated all the employees of NPCIL. He said that achievement of criticality of KAPP-4, within six months of commercial operation of Unit-3 was a significant achievement. Together with the smooth operation of KAPP-3, it demonstrated the strength of NPCIL in all facets of nuclear power viz. design, construction, commissioning and operation. He urged everyone to work towards rapid completion of the units under construction.

After the first criticality, several experiments / tests will be conducted in KAPP-4 and the power level raised in steps, in line with the clearances of the Atomic Energy Regulatory Board (AERB), ultimately culminating in operation of the unit at full power.

KAPP 3&4 (2X700 MW) are located at Kakrapar in Surat district of Gujarat, adjacent to the existing reactors KAPS 1&2 (2X220 MW). These indigenous PHWRs have advanced safety features and are among the safest reactors in the world. While these reactors have been designed, constructed, commissioned and operated by NPCIL, the supply of equipment and execution of contracts have been by Indian industries / companies, and thus the true reflection of the spirit of AtmaNirbhar Bharat.

NPCIL presently operates 23 reactors with a total capacity of 7480 MW and has nine units (including KAPP-4) with a capacity of 7500 MW under construction. In addition, 10 more reactors with a total capacity of 7000 MW are in pre-project activities. These are expected to be completed progressively by 2031-32.