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(भारत सरकार का उपक्रम)
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PRESS RELEASE

FIRST REACTOR OF KUDANKULAM NUCLEAR POWER PLANT WILL ATTAIN CRITICALITY AROUND MIDNIGHT

The First Unit of Kudankulam Nuclear Power Project (KKNPP) is well on the way to attain first criticality at midnight of July 13-14,2013. The neutron multiplication in the reactor core has started around noon time today and is progressing further in line as expected with dilution of the boric acid in the primary coolant water. KKNPP-1 is the largest single power generation unit of the country.

The first approach to criticality was undertaken after conforming to all the criteria for system performances as per the design requirements and after meeting all the stipulated statutory and regulatory requirements. The final clearance has been obtained from AERB based on the report of observer's team, safety review committees and after in depth review by AERB and the process has started at 2349 hours on 11.07.2013. A team of AERB, NPCIL and Russian specialists is supervising the whole process.

At the next step, reactor power will be increased in stages to generate 1000 MW electricity as per laid down procedures and regulatory clearances. At the first stage the plant will be synchronized to the southern grid with about 400 MW power within expected period of 30 to 45 days from criticality. In the

subsequent stages, after completion of procedural and regulatory requirements, power will be increased in steps of 50%, 75%, 90% and 100%.

This is 21st nuclear power reactor in the country and India's first Pressurised Water Reactor belonging to Light Water Reactor category. KKNPP Units 1 and 2 are VVER-1000 type reactors set up at Kudankulam in Tamil Nadu with technical cooperation with the Russian Federation.

The state-of-the-art KKNPP reactors incorporate enhanced safety features ensuring the highest level of safety, in line with the current international standards. These are Generation III+ reactors incorporating a combination of active safety systems as well as passive safety systems like Passive Heat Removal System (PHRS), Hydrogen Re-combiners, Core Catcher, Hydro Accumulators and Quick Boron Injection System (QBIS). This combination of multi-layered safety features ensures safety of the plant, public and environment.

The nuclear fuel loading in the reactor of Unit-1 was accomplished in October 2012. The Reactor was loaded with fuel assemblies containing about 80 tonnes of Uranium Oxide. Subsequently, a number of safety tests at the operating temperature and pressure were carried out successfully, ensuring the performance of various equipment as per the design intent.

KKNPP unit-1 will add 1000 MW electricity to the southern grid and increase the contribution from nuclear power in the country to 5780 MW. Apart from first unit of KKNPP, other nuclear power projects which are under construction includes KKNPP Unit#2(1000 MW), Kakrapar Atomic Power Project- 3&4 (2X700 MW) and Rajasthan Atomic Power Project - 7 & 8 (2X700 MW). On completion of these ongoing projects, India's installed nuclear power will reach to 9580 MW.



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