



First 220 KV level power transformer in the state electrified with HMI technology

Why in News?

On 22 May 2023, Atul Joshi, Chief Engineer of MP Transco (Madhya Pradesh Power Transmission Company) informed that the company has innovated for the first time in the state with a power transformer of 160 MVA capacity at 220 KV voltage level. It is energized remotely with the help of (Human Machine Interface) technology.

Key points

- This advanced technology has so far been successfully used in new 132 kV voltage level substations and 132 kV lines at MP Transco, which have been remotely energized.
- This is the first time a hyper-sensitive device like 160 MVA has been remotely energized using this technology at a 220 kV voltage level.
- The new 160 MVA capacity power transformer installed at a cost of about Rs 6.50 crore at 220 KV sub-station at Jabalpur Nayagaon has been energized using this technology.
- With the electrification of this transformer, the transmission capacity of the Mahakaushal region has increased significantly. Madhya Pradesh Power Transmission Company transmits power from its 58 sub-stations in 8 districts of Mahakaushal region, including two sub-stations of 400 kV and 47 substations of 132KV.
- These include 400 kV side 830 MVA, 220 kV side 3660 MVA and 132 kV side 4607 MVA thus having a total transformation capacity of 9097 MVA.
- Narsinghpur, Damoh, Seoni, Mandla, Dindori and Katni districts of Mahakaushal region will now get additional power of about 50 MW from Jabalpur if needed. It is noteworthy that in this sub-station of Jabalpur, apart from Amarkantak, Birsinghpur, Bargi power generation stations, electricity is transmitted from the power grid.
- Human machine interface technology involves controlling devices remotely using human and computer machines. This technology is used with the help of ADMS in the 3 SCADA Control Center operating in the state of MP Transco.
- It is known that MP Transco has made many innovations in its system in the past as well. These include the implementation of a cyber security system in the first state load dispatch system in the country, implementation of SCADA system, drone patrolling of transmission lines, plan to remotely operate 400 KV sub-stations.



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