

Industrial Visit Report

POWERGRID Academy of Leadership, Manesar

The Department of Electrical & Electronics Engineering, Maharaja Surajmal Institute of Technology organized an industrial visit to the Powergrid Academy of Leadership, Manesar, Gurugram, on 19th February 2026. The academy serves as a premier training and operational centre of Power Grid Corporation of India Limited (PGCIL).

A total of 23 students from the EEE 2027 Batch (6th Semester) participated in the visit under the guidance of Dr. Sunil Gupta (Associate Professor, EEE) and Dr. Rakhi Kamra (Assistant Professor, EEE). The technical session was conducted by Mr. Ram Avtar Meena, DGM, PGCIL, who provided valuable practical insights into substation design, operation, maintenance, and protection practices.

During the visit, students observed substation operations at multiple voltage levels—440 kV, 220 kV, and 33 kV—ensuring efficient power transmission and distribution. They learned about the significance of the double bus bar arrangement in maintaining reliability during faults and maintenance. Exposure was provided to both Gas Insulated Switchgear (GIS) using SF₆ gas for compact and safe operation, and Air Insulated Switchgear (AIS) systems known for ease of maintenance. The functioning of circuit breakers for fault isolation and reactors for reactive power compensation and voltage regulation was also demonstrated.

At the Smart Grid Knowledge Centre, students were introduced to modern power system technologies such as smart meters, SCADA-based monitoring systems, microgrid configurations, and automated outage management systems. The visit successfully bridged the gap between classroom learning and industry practices, enhancing students' technical understanding, safety awareness, and readiness for real-world power system operations.

