G H Patel College of Engineering & Technology

(A Constituent College of CVM University) Vallabh Vidyanagar

Event Report

Expert Talk on "Energy Scenario of Gujarat & Capacitive Power Generation" at Electrical Engineering Department, GCET, V V Nagar

- **Date:** 04th August 2025
- **Time:** 4:00 PM to 5:00 PM
- **Institute:** G H Patel College of Engineering and Technology, Vallabh Vidyanagar, Gujarat.
- **Mode of Conduct & Venue:** Offline, GCET Room No A314
- **Faculty Coordinator**: Jasmin James, Assistant Professor, Electrical Department, GCET.
- **Expert Details:** Mr. Kuldeep Ruparelia, BEE Certified Energy Auditor
- **Event Details:**

Mrs. Jasmin James, Assistant professor of Electrical Engineering Department, G H Patel College of Engineering & Technology (GCET) organized an expert talk on "Energy Scenario of Gujarat & Capacitive Power Generation" on 4th August 2025 for the third year elective students in the subject Energy systems including ME, MC, CH, CL and CP students of GCET.

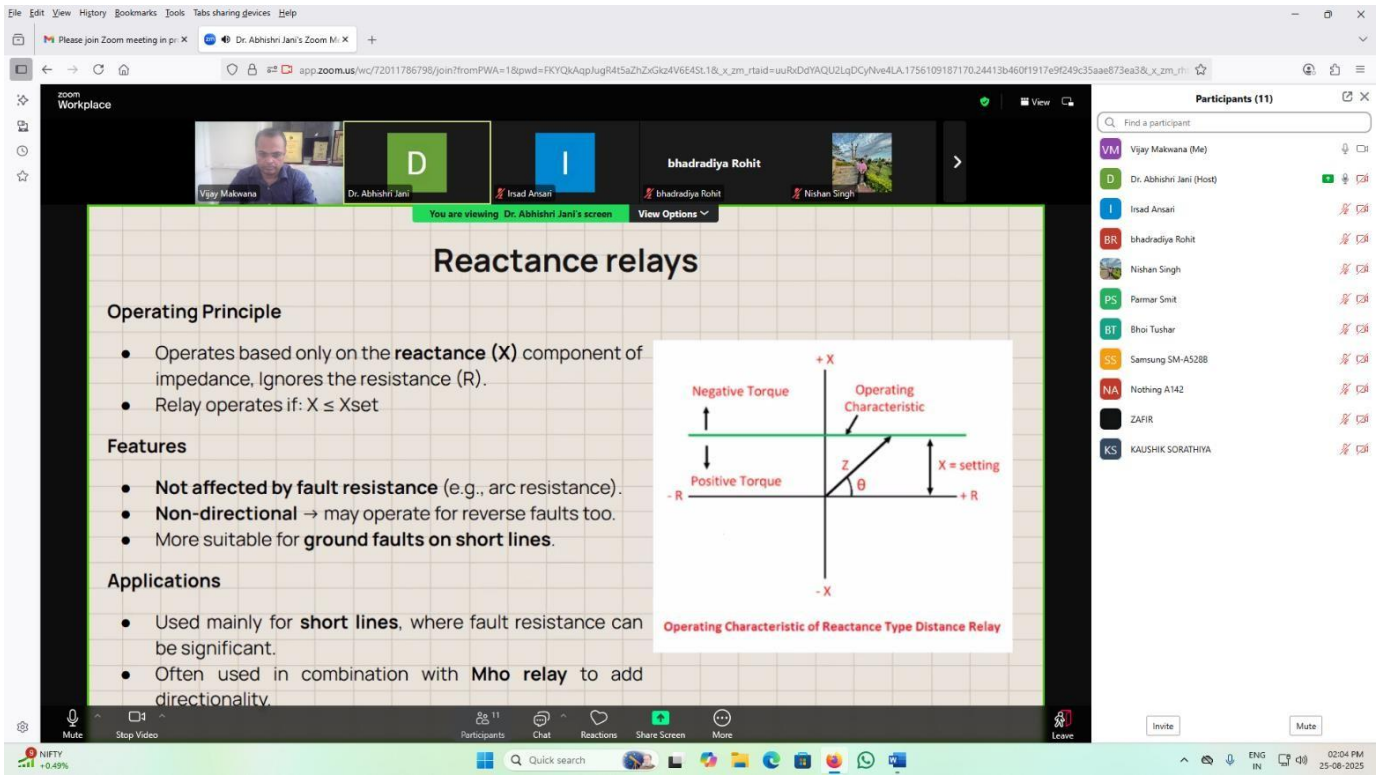
Mr. Kuldeep Ruparelia of Electrical Research and Development Association (ERDA), Vadodara, shared his technical expertise by explaining different types of electric power generation modes, such as hydro, thermal, solar etc. He has also covered the fundamentals of energy conservation and energy audit. The capacitive power generation and its applications are also discussed which is turned out to be an effective addition to the subject syllabus. The expert talk ended with a very interactive question-answer session about various energy generation and conservation aspects.

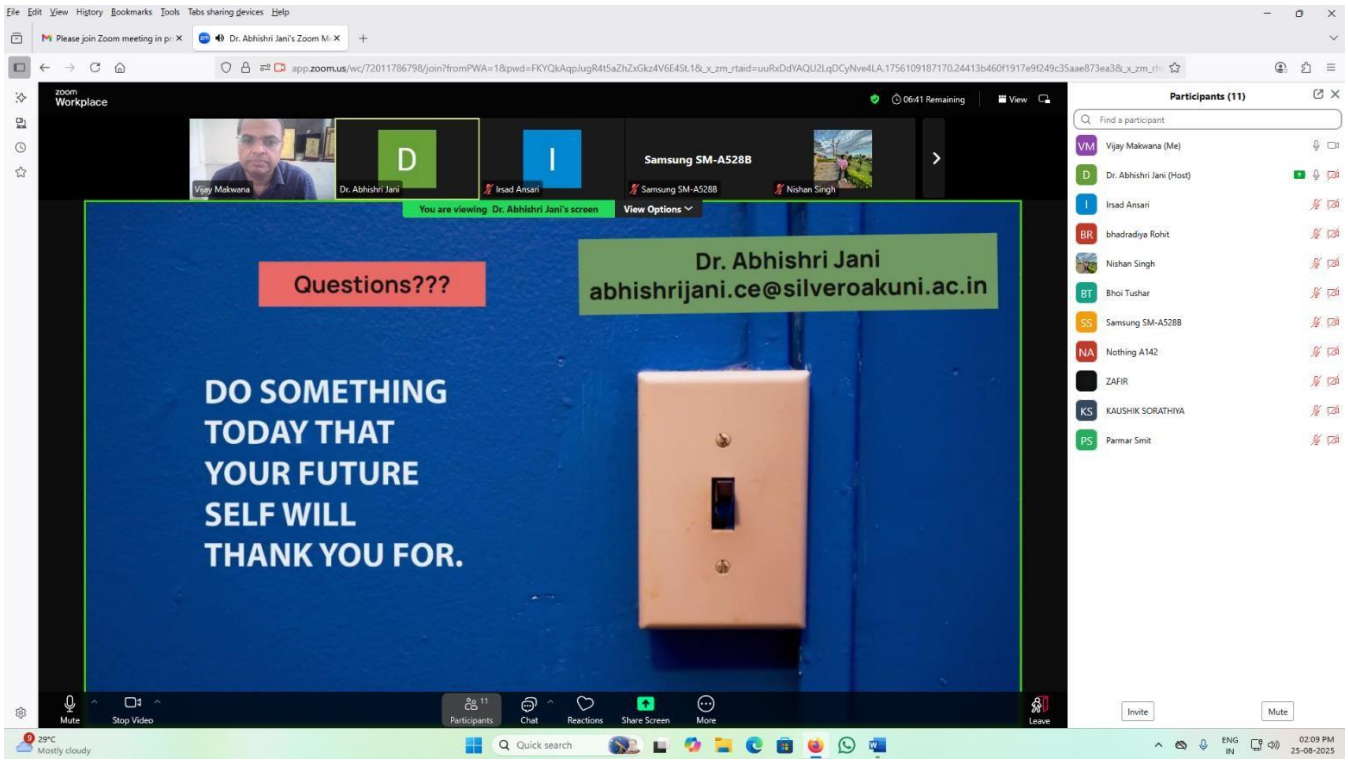
Photographs:


GPS Map Camera
Anand, Gujarat, India
Near, Bakrol Rd, Mota Bazaar, Vallabh Vidyanagar, Anand, Gujarat 388120, India
Lat 22.560461° Long 72.919796°
04/08/2025 04:28 PM GMT +05:30
Google


GPS Map Camera
Anand, Gujarat, India
Near, Bakrol Rd, Mota Bazaar, Vallabh Vidyanagar, Anand, Gujarat 388120, India
Lat 22.560454° Long 72.919792°
04/08/2025 04:28 PM GMT +05:30
Google


GPS Map Camera
Anand, Gujarat, India
Near, Bakrol Rd, Mota Bazaar, Vallabh Vidyanagar, Anand, Gujarat 388120, India
Lat 22.560441° Long 72.919794°
04/08/2025 04:28 PM GMT +05:30
Google


Reactance relays
Operating Principle
Operates based only on the reactance (X) component of impedance, Ignores the resistance (R).
Relay operates if: X ≤ Xset
Features
Not affected by fault resistance (e.g., arc resistance).
Non-directional → may operate for reverse faults too.
More suitable for ground faults on short lines.
Applications
Used mainly for short lines, where fault resistance can be significant.
Often used in combination with Mho relay to add directionality.
+X
Negative Torque
Operating Characteristic
Positive Torque
Z
θ
X = setting
-R
+R
-X
Operating Characteristic of Reactance Type Distance Relay
Participants (11)


Questions???
Dr. Abhishri Jani
abhishrijani.ce@silveroakuni.ac.in
DO SOMETHING TODAY THAT YOUR FUTURE SELF WILL THANK YOU FOR.
Participants (11)