



Sandip University, Nashik
School of Engineering and Technology
Electrical Engineering Department

REPORT ON EXPERT LECTURE ON “SMART GRID”

Organized By:

*Department of Electrical Engineering (EED)
School of Engineering and Technology (SOET)
Sandip University, Nashik (SUN)*

Date: 01 September 2026, Tuesday, 1 Pm to 3 Pm.

Topic: Smart Grid

Resource Person: Mr. Sachin Kakade, Founder & President, Swapnapurt Foundation, Nashik

Participants: 50 Students from SE and BE Electrical Engineering

1. Introduction

The Department of Electrical Engineering (EED), School of Engineering and Technology (SOET), Sandip University, Nashik, organized an **Expert Lecture on “Smart Grid”** on **01 September 2026** for the students of Second Year (SE) and Bachelor of Engineering (BE) Electrical Engineering.

The expert lecture was conducted with the objective of providing students with practical and industry-oriented knowledge about the emerging concept of Smart Grid technology. The session was delivered by **Mr. Sachin Kakade, Founder & President, Swapnapurt Foundation, Nashik**, who shared his valuable knowledge and insights regarding modern power systems and the role of smart technologies in the electricity sector.

A total of **50 students** from SE and BE Electrical Engineering actively participated in the expert lecture. The session helped students understand the importance of modernization and digitalization of conventional electrical power systems.

2. Objectives of the Expert Lecture

The major objectives of organizing the expert lecture were:

1. To introduce students to the basic concept and architecture of Smart Grid technology.
2. To explain the difference between conventional power grids and Smart Grids.
3. To familiarize students with modern technologies used in Smart Grid systems, such as smart meters, sensors, communication networks, automation, and intelligent control systems.
4. To explain the role of renewable energy sources and distributed generation in Smart Grid systems.
5. To provide practical and industry-oriented knowledge about the applications of Smart Grid technology in modern power systems.
6. To create awareness among students about emerging trends and career opportunities in Smart Grid, power system automation, energy management, and related fields.
7. To encourage students to develop interest in advanced electrical engineering technologies and their practical applications.

3. Details of the Lecture

The expert lecture commenced with an introduction to the concept of the Smart Grid and its growing importance in the modern electrical power sector. The resource person explained how conventional power systems are being transformed through the integration of digital communication, automation, monitoring, and advanced control technologies.

The students were introduced to the basic structure and functioning of a Smart Grid. The lecture covered the importance of **two-way communication, real-time monitoring, intelligent control, automation, smart metering, and efficient energy management.**

The resource person also discussed the integration of **renewable energy sources**, distributed generation, and modern energy storage systems with the electrical grid. Emphasis was placed on the need for intelligent grid management to accommodate changing energy generation and consumption patterns.

The session also helped students understand the role of modern technologies in improving **power system reliability, efficiency, power quality, demand management, and outage management.**

Industry-oriented examples and practical insights were shared during the session, which helped students relate their classroom learning to real-world applications.

4. Major Topics Covered

The following important topics were discussed during the expert lecture:

- Introduction to Smart Grid
- Need for Smart Grid technology
- Conventional Grid versus Smart Grid
- Smart Grid architecture
- Smart meters and advanced metering infrastructure
- Communication and information technologies in Smart Grid
- Distribution automation
- Real-time monitoring and control
- Integration of renewable energy sources
- Distributed generation
- Energy management
- Demand-side management
- Energy storage systems
- Power quality and reliability improvement
- Benefits and challenges of Smart Grid implementation
- Practical applications of Smart Grid technology
- Future scope and career opportunities in Smart Grid technology

5. Student Participation

A total of **50 students from SE and BE Electrical Engineering** participated in the expert lecture. The students actively listened to the technical discussions and gained valuable knowledge from the expert.

The interaction between the students and the resource person provided an opportunity for students to clarify their doubts and understand the practical aspects of Smart Grid technology.

The lecture encouraged students to explore advanced technologies in the field of electrical engineering and understand their relevance to the future power system.

6. Outcomes of the Expert Lecture

After attending the expert lecture, the students were able to:

1. Explain the basic concept and importance of Smart Grid technology.
2. Differentiate between conventional electrical grids and Smart Grids.
3. Identify major components and technologies used in Smart Grid systems, including smart meters, sensors, communication systems, and automation.
4. Understand the role of renewable energy and distributed generation in modern power grids.
5. Describe the importance of real-time monitoring, intelligent control, and energy management in Smart Grid systems.
6. Understand the practical applications of Smart Grid technology for improving reliability, efficiency, and power quality.
7. Recognize emerging opportunities and career prospects in Smart Grid, renewable energy, automation, and modern power systems.
8. Relate theoretical knowledge with practical applications in the field of modern electrical power systems.

7. Benefits to Students

The expert lecture provided several benefits to the participating students:

- Enhanced understanding of emerging Smart Grid technologies.
- Exposure to practical and industry-oriented knowledge.
- Better understanding of modern power system operation.
- Awareness of renewable energy integration and energy management.
- Understanding of the importance of automation and digital communication in power systems.
- Motivation to explore projects and research areas related to Smart Grid technology.
- Awareness of future career opportunities in the modern energy sector.

8. Conclusion

The Expert Lecture on “Smart Grid” organized by the Department of Electrical Engineering, SOET, Sandip University, Nashik, on 01 September 2026 was informative and beneficial for the participating students.

The session delivered by Mr. Sachin Kakade, Founder & President, Swapnapurt Foundation, Nashik, provided students with valuable technical knowledge and practical insights into the rapidly developing field of Smart Grid technology.

The participation of 50 SE and BE Electrical Engineering students reflects the students' interest in emerging technologies in the electrical engineering domain. The lecture successfully helped bridge the gap between theoretical academic learning and practical applications and encouraged students to explore advanced technologies for their future academic projects, research, and careers.



The Department of Electrical Engineering sincerely expresses its gratitude to **Mr. Sachin Kakade** for delivering the informative and insightful expert lecture and for sharing his valuable knowledge and experience with the students.

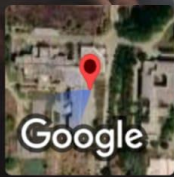
Event Summary

Particular	Details
Department	Electrical Engineering Department (EED)
Institute	School of Engineering and Technology (SOET), Sandip University, Nashik
Date	01.09.2026
Topic	Smart Grid
Resource Person	Mr. Sachin Kakade
Designation	Founder & President, Swapnapurt Foundation, Nashik
Participants	SE and BE Electrical Engineering Students
Total Participants	50 Students
Nature of Activity	Expert Lecture
Major Benefit	Technical and industry-oriented exposure to Smart Grid technology



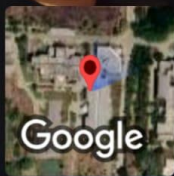
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Conclusion

The Expert Lecture on “Smart Grid” provided the participating SE and BE Electrical Engineering students with valuable insights into the concepts, applications, and emerging developments in smart grid technologies. The session enhanced students’ understanding of intelligent power generation, transmission, distribution, renewable energy integration, smart metering, automation, and efficient energy management. The

interaction with the resource person also helped bridge the gap between theoretical knowledge and practical industry-oriented applications, while encouraging students to explore innovative solutions for future energy systems.

SDG Mapping

The programme contributes to the following United Nations Sustainable Development Goals (SDGs):

- SDG 7 – Affordable and Clean Energy: Promotes awareness of smart grids, renewable energy integration, energy efficiency, and reliable access to sustainable energy.
- SDG 9 – Industry, Innovation and Infrastructure: Encourages technological innovation and development of smart, resilient, and sustainable electrical infrastructure.
- SDG 11 – Sustainable Cities and Communities: Smart grid technologies support efficient energy management and sustainable urban infrastructure.
- SDG 12 – Responsible Consumption and Production: Promotes efficient utilization and management of electrical energy, reducing energy wastage.
- SDG 13 – Climate Action: Supports the adoption of renewable energy and energy-efficient technologies that can contribute to reducing greenhouse-gas emissions.



Event coordinator sign



H.O.D.
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