

Background

The present-day electricity sector is undergoing major transformation through adopting smart grid concepts from generation till consumer end. It is witnessing increased share of renewables, storage, EV charging stations, microgrids, power electronic interface, intelligent sensors and controllers, automation, and smart metering at different levels in the network. The large penetration of renewables, being intermittent in nature, will pose system stability, and power quality concerns, which will require proper compensation and controls. The operation, control and protection philosophy of emerging smart grid will pose several R&D and operational challenges.

This workshop will include talks by leading experts from industries and academics on some of the key smart grid technologies and the associated challenges.

The smart city prototype in IIT Kanpur, one of the fourteen pilot projects sanctioned by the Ministry of Power (MOP) in 2014, is an important milestone in the smart grid journey of India. Main objective of the project was to develop and implement key solutions and identify the associated challenges in implementing smart distribution system technology in Indian cities. Key components of the IIT Kanpur pilot include supervisory control and data acquisition system (SCADA), advanced metering infrastructure (AMI), home automation (HA), and rooftop solar PV integration. Hands-on training and demonstration on some of these technologies will be given in this workshop.

Objective

The main objective of this workshop is to familiarize the participants from utilities, industries and R&D organizations about different concepts and developments in the Smart Grid Technology. Experience gained through some of the pilot projects will also be shared.

Sessions/Topics

The topics to be covered in the workshop include the following.

1. Introduction to Smart Grid
2. Smart Grid Architecture and Building Blocks
3. Smart Grid Analytics and Distribution Management
4. Peak Load Management and Demand response
5. Renewable Integration and Interfacing Converters
6. Loss Reduction, Asset Monitoring and Optimization, and Outage Management System
7. Quality of Supply and Service
8. Cyber Security in Power System
9. EV and Storage Integration
10. Smart Grid Communication Systems
11. Consumer Engagement and Participation
12. Regulatory Considerations in Smart Grid Projects
13. IT Enablers for Smart Grid Technology

Nomination Form

Training Program on Smart Grid Components and Technologies

February 24-26, 2020, IIT Kanpur

Name: _____

Designation: _____

Organization: _____

Gender (for accommodation): M F

Accommodation required: Yes No

Correspondence Address: _____

_____ PIN: _____

Phone: _____ Fax: _____

E-mail: _____

Qualification: _____

Category

Utility

Industry

R&D organization

(Signature of Participant)

Forwarded

(Head of the Organization/Unit)
Signature with seal

Coordinators

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Nomination & Workshop Registration

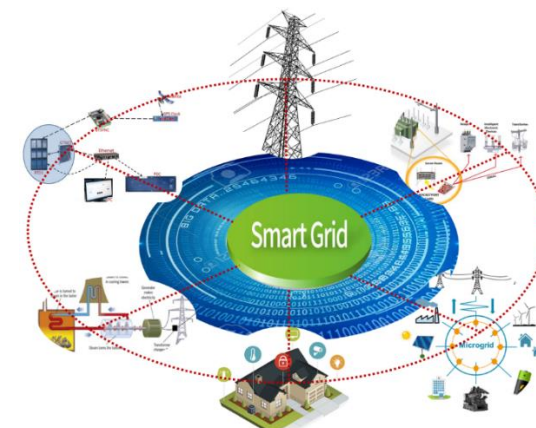
Nominations are invited from the Power utilities, industries and R&D organizations for attending this three-day workshop at IIT Kanpur. The filled-up nomination form duly signed by the Head of the Organization or Unit, giving details of the person attending the workshop, should reach us latest by 5th February 2020 through email or post. Notification about selection will be finalized by February 10, 2020. The nomination form can also be downloaded from the Smart City (<https://www.iitk.ac.in/smartcity/>) website.

Since the seats available in the workshop are limited, the nominations received on first come first serve basis will be considered. There is no registration charge to attend the conference. Boarding and lodging will be provided by IIT Kanpur. The participants have to bear their travel cost only.

Schedule and Venue

The workshop will be held during February 24-26, 2020 in the Smart City Control Center in IIT Kanpur.

Training Program on Smart Grid Components and Technologies 24-26 February 2020, IIT Kanpur



Organized by



**Department of Electrical Engineering
Indian Institute of Technology Kanpur**

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Ministry of Power
Government of India

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