

**IETE NOIDA Center  
Center of Excellence 'CoE'**



सह वीर्यं करवावहै



## One Day Capsule Course on Solar Energy and Sustainability Immersion as per IS 16221 (Part 2):2015

- ❖ **Handholding and Mentoring Support**
- ❖ **No Previous experience required**
- ❖ **No Age or Education Barrier**
- ❖ **IETE Certificate on completion**

**Date:** 11-Oct, 2025

**Batch Size:** 20

**Time :** 1000 hrs – 1530 hrs



**Selection on First come First serve basis**

### Benefits and Coverage:

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- To understand Energy Requirement Analysis: Demands, Consumption, Projections
- Understanding Regulatory Compliance and Environmental Impact as per IS16221:2015
- Sustainable Energy Solutions- Energy Efficiency, Environmental Aspects
- Best Practices- Calculations, Installation, Applications and Govt. Support

**Note:** Soft copy of training material, writing material and refreshment will be provided

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**Venue: The Institution of Electronics and Telecommunication Engineers, PS-1D, Sector 29, Noida, UP.**  
**email: ietenoidacenter@gmail.com**

# About IETE

The Institution of Electronics and Telecommunication Engineers (IETE) is a professional society dedicated to the advancement of electronics, telecommunication and information technology. Established in 1953.

IETE is a leading body in India that promotes technical education, research and development in these fields. The Government of India has recognized IETE as a Scientific and Industrial Research Organization (SIRO). IETE also holds the status of an educational institution of national eminence.

## Centers

IETE has 61 centers in India and 2 abroad apart from professional activity centre in USA, with over 1,25,000 members, including the IETE Centre of Excellence 'CoE' in Noida, which is organizing this capsule course on Solar Energy and Sustainability Immersion.

## Objectives

1. Promote the advancement of electronics, telecommunication and IT.
2. Provide a platform for professionals to share knowledge and expertise.
3. Foster research and development in these fields.
4. Offer certifications and training programs for professionals

## Activities

1. Organizes conferences, seminars and workshops on emerging technologies.
2. Publishes technical journals and newsletters.
3. Provides certification programs for professionals.
4. Offers training and development programs for industry professionals

# About the Course

## Technical Understanding

This course provides insights into solar energy fundamentals, primarily focusing on green energy and specifies requirements for the construction, protection, electromagnetic compatibility and fire safety of inverters used in solar power systems, ensuring they meet the necessary quality and safety, as outlined in **IS 16221 (Part 2):2015**.

It also covers best practices for solar energy implementation, energy consumption patterns and storage solutions with understanding of design efficient solar energy systems.

By completing this course, participants will gain a comprehensive understanding of solar energy management practices tailored to their specific needs.

## Entrepreneurship Development

The course is designed to equip participants with the knowledge and skills necessary to develop entrepreneurial ventures in the solar energy sector, generating more entrepreneurs and fostering independence.

By understanding the intricacies of solar energy systems, participants can identify business opportunities in areas such as installation, maintenance, energy auditing, and consulting, and develop innovative solutions to address energy-related challenges.

## Environmental Impact and Sustainability

The course aims to promote sustainable entrepreneurship in the solar energy sector, enabling participants to make a positive impact on the environment while building successful businesses. By exploring business models and strategies for solar energy solutions, participants can contribute to a more sustainable future, reduce carbon emissions, and capitalize on emerging opportunities in this field, ultimately becoming self-reliant and independent entrepreneurs and service providers.

# Training Methodology

The course will employ a blended approach, combining:

1: Classroom-based lectures

2: Interactive presentations

3: Informative videos

4: Real-life case studies

5: Devising solutions for green energy systems, solar power integration, and renewable energy applications.



# Learning Objectives

## 1: Develop Awareness

Understand the manufacturing, installation, and maintenance of solar energy systems, including photovoltaic (PV) panels, inverters, mounting systems, and other components commonly used in solar power generation, while adhering to safety requirements and EMC (Electromagnetic Compatibility) standards as per Indian regulations

## 2: Achieve Quality and Safety Standards

Acquire skills to produce high-quality recycled materials meeting prescribed standards as per –

IS 16221 (Part 2):2015 for solar installation purposes

IS 14886 and IS 61730 (Part 1 & 2) for solar panel and system requirements-

IS 14886:2023 for updated solar installation guidelines

IEC 61215 (Part 1):2021 for crystalline silicon PV module design qualification and type approval

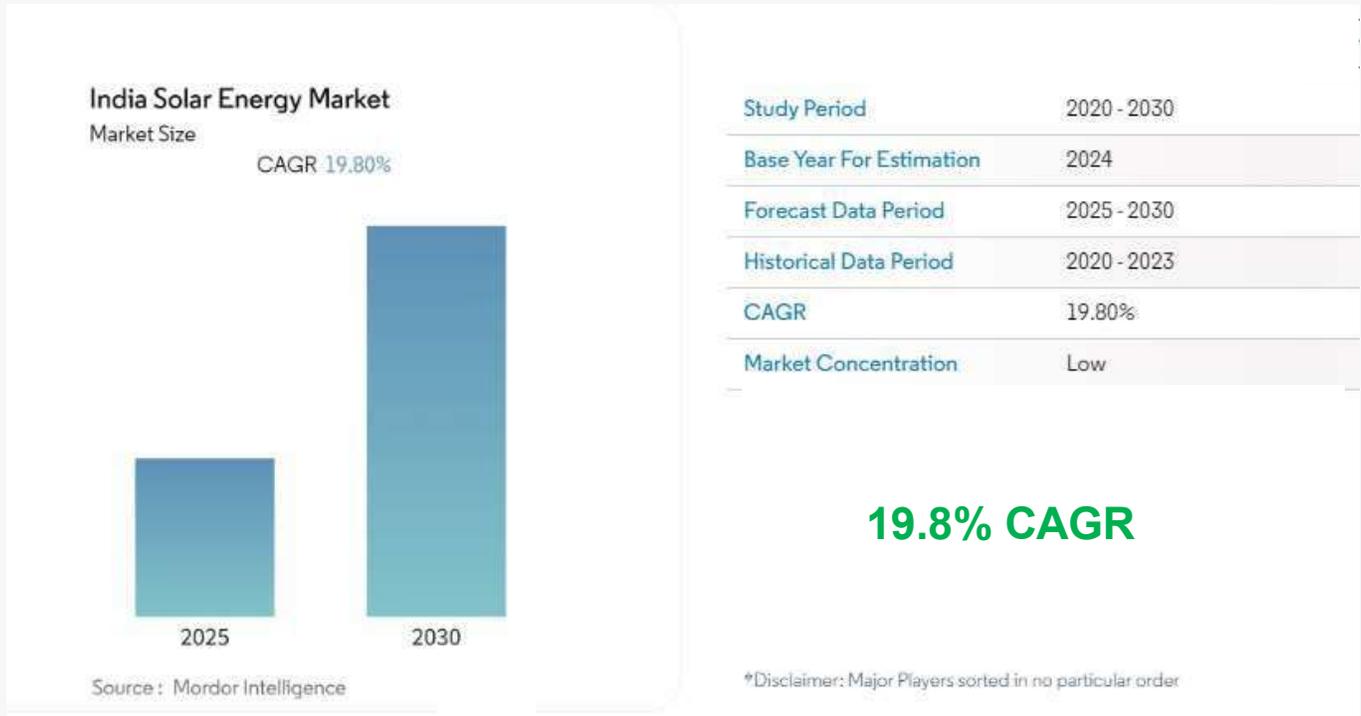
IS/IEC 61730 (Part 1 & 2) for safety and performance requirements

## 3: Contribute to Sustainability

Promoting environmentally responsible solar energy practices and reducing carbon footprint through efficient installation, maintenance, and disposal of solar energy systems.



# MARKET RESEARCH



## Market Size & Future Growth Potential:

In India, approximately 2.7 million households are using solar power at home, out of a potential 250 million households that can use it. This translates to only about **1%** of Indian homes utilizing solar energy, despite the country's ambitious targets to increase renewable energy adoption

**Current Solar Users:** Around 2.7 million households have installed solar panels, with a total installed capacity of 11.08 GW as of December 2023.

**Potential Solar Users:** About 250 million households can use solar power, with a potential capacity of 637 GW, assuming 3% of wasteland is covered with solar panels.

**Rural vs. Urban Potential:** Rural areas have a higher solar potential of **363 GW**, while urban areas have **274 GW**.

The Indian government aims to increase solar energy production, with targets to reach 500 GW of renewable energy capacity by **2030**

# Our Speakers



**Prof. G P Singh**



**Brig. V K Tandon (retd)**



**Prof. (Dr) Shailesh Mishra**

**P**rof. GP Singh, FIETE, MIMA, PGDIM, B.E. (Electronics & Communication), is a distinguished veteran with more than of 50 years of experience in the field of telecommunications and space technology. A Senior Scientist retired from ISRO, he was recognized with the prestigious ISRO Award for his contributions for SITE Project, Edusat Utilization Project and Former Consultant to Antrix Corporation Ltd. Currently, he serves as Chairman of the IETE Noida Center. With a proven track record of delivering numerous Indian and international projects, He was deputed to USA and Kingdom of Saudi Arabia by ISRO. Mr. Singh is a renowned expert in SATCOM technology. As a Fellow of IETE and a respected figure in industry and academia, he continues to share his knowledge and insights, inspiring future generations

**B**rig. Vinod Tandon (Retd.) is a distinguished veteran of the Indian Army with 56 years of experience. A seasoned expert in Electronic Warfare, he served as Chief Signaling Officer for the Army's conversion of water areas in Gujarat and Rajasthan. As Chief Instructor at the Military College of Telecommunication Engineering, he mentored numerous officers. With a background in Electrical Engineering, Brigadier Tandon is a respected figure in the field of telecommunications. A veteran and Fellow Member of IETE, he continues to share his expertise and insights with industry and academia.

**P**rof. (Dr) Shailesh Mishra is an accomplished professional is a Certified Chartered Engineer and a Fellow IETE, Fellow ISLE, Fellow APA who's involved in doing the right piece of research with over 23 years of experience in Environmental Research, Regulatory Affairs, Safety Standards, Brand Support and Government Affairs. He is currently involved with over 250 brands with several Industry Associations, Ministries, Universities/Academic Institutions and NGOs as Adviser at ascendant levels. Dr. Mishra has worked with companies like PCTIL, Samsung, Videocon and Panasonic, where he last served as Head of Technical Regulations and External Affairs for APMEA region. Dr. Mishra holds dual doctorates in Business Management and Electronics and Communication Engineering. Featured in Forbes India and recipient of BW 40 Under 40 award in Education. He has received the prestigious Person of the Year award for three consecutive years. With 49+ patents in various fields of electronics, physics, Acoustics and Plant anatomy, Dr. Mishra is a prolific innovator. He mentors with Ministry of Skill Development and Entrepreneurship (NIESBUD), National Skill Development Corporation (SIDH) and Ministry of Electronics and IT (ESDM). He is also an EC member of IETE Noida Centre, driving innovation and growth in multiple capacities.

# Credits



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## Center of Excellence 'CoE', IETE NOIDA Center

For the management and operational support, venue and  
certification



## M/s Otrinee India Pvt. Ltd

For the program directions, contents development and Training

# Happy learning!