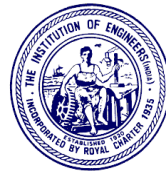




# Engineering Staff College of India

Autonomous Organ of The Institution of Engineers (India)  
Old Bombay Road, Gachibowli, Hyderabad – 500 032, Telangana, India



## POWER & ENERGY DIVISION

### CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMME

## Cost Reduction by Energy Auditing, Management & Design of Solar Energy Systems

**(4 days On-line Course)**

**22 – 25 August, 2023**

**From 11:30 to 17:15 hrs (4 Hours 30 Minutes per day)**

**Online Interactive Sessions | Digital Learning | Experts Online Support**

#### Introduction

Energy saved is energy generated. We cannot keep on producing non-renewable resources like petrol, diesel and electricity. So the need of the hour is the better utilization of existing resources.

As the field of energy management matures, so do the tools and best practices available to ensure that the energy required by an organization is used in the most efficient way possible. In the past, energy management practices consist primarily of replacing inefficient equipment and then using any number of methods to estimate the savings gained. Studies have shown, however, that energy savings can be dramatically increased and maintained over the period of time by adopting Energy Auditing and implementing consistent Energy Management practices and recognized measurement and verification procedures.

The primary objective of Energy Audit is to find out where and how inefficiently energy is used in an organisation and determine ways to reduce energy consumption per unit of product output or to lower operating costs.

The objective of Energy Management is to

- achieve and maintain optimum energy procurement and utilisation, throughout the organization
- minimise energy costs / waste without affecting production & quality
- minimise environmental effects.

As energy management standards and best practices begin to see widespread adoption, the information systems required to support them will play a crucial role in their implementation and success. These enterprise energy management (EEM) systems can provide the detailed data and analysis capabilities required to ensure energy management strategies and conservation measures are on track throughout an organization.

#### Objectives

The objective of this training module is to give the participants an insight to the need and usefulness of conducting Energy Audit and how to optimize the energy cost through implementation of Energy Management practices and design a solar energy system so as to not only achieve energy savings and reduce emissions but also meet PAT targets.

#### Course Contents

- Energy Audit & Methodology
- Types of Energy Audits
- Detailed Energy Audit
- Energy Management practices
- Understanding Costs
- Benchmarking & Energy Billing
- Alternative Energy Sources
- Financial Analysis like Pay Back & Net Present Value, ROI, etc.,
- Solar photo voltaic modules, its characteristic curves and power generation.
- Inverter and its operation and suitability for grid connected power systems
- Standards of solar panel and battery
- 1 MW Solar Power Plant Design and Solar Resources availability
- Latest Net Metering Guidelines (Gross Metering and Net Metering) & Case Studies

An ISO 9001:2015, ISO 14000:2015, ISO/TEC 17025:2017, ISO 45001:2018, ISO 50001:2018 Certified,  
AICTE & CEA Recognized Institution)

**Centre for Promotion of Professional Excellence**

## Methodology

Methodology of the programme includes Digital Learning through LMS Platform, Interactive sessions with audio visual aids, discussions, sharing of experiences etc. Online sessions will be conducted through Cisco WebexApp.

## Target Participants

Since Energy Conservation is every Citizen's responsibility, this course is relevant and useful to all Senior Level, Middle level and working level executives working in Power Utilities (Gencos, Transcos and Discoms) , Manufacturing and Process Industries, Refineries, Corporate Offices and Head Offices, Educational Institutes and Universities, R&D, Defence Organizations, Municipalities, Banking Sectors etc Central and State Government Offices.

## Benefits to the participants

- Capacity building with Knowledge sharing from well experienced domain specialist.
- Reading material will be emailed to all participants who have registered.
- A Certificate of participation will be awarded to each participant on conclusion of the programme

## Programme Dates & Timings

**Dates: 22 – 25 August, 2023 (4 Hours 30 Minutes per day)**

**Online Session timings** will be from 1130 to 1715 hrs with breaks in between for tea and lunch.

### Programme Advisor

**Er. A Chadra Mohana Rao, FIE**  
(Former Scientist 'G', DAE, AGM, Tata Power)  
Advisor (Mob: 9866185035)

### Programme Director

**Er. Vidya Sagar Ubba, FIE**  
(Former CGM, TSSPDCL)  
Head & Sr. Faculty (Mob:8179559990)

## Course Fee

**₹ 12,000/- Plus 18% GST= Rs.14,160/-per participant**

**Group Discount:** 10% discount for three (3) or more participants if sponsored by the same organization.

**(All discounts are applicable only if fee is received at ESCI a week before the commencement of the programme)**

ESCI's **GST No:** 36AAATT3439Q1ZVPAN **No.** AAATT3439Q

The payment may be made by Electronic Fund Transfer (EFT) to ESCI – SB A/c No. 33705165550 with The SBI, Manikonda Branch, GachiBowli, Hyderabad – 500 032 by NEFT / RTGS / IFSC Code No: SBIN0011076 – MICR No: 500002107. **While using EFT method of payment, please ensure to communicate us your company name and programme title.**

## Registration

**Online registration** shall be available on ESCI web portal : [www.escihyd.org](http://www.escihyd.org)

**To register manually** please send your nominations giving details of name, designation, contact address, email address, mobile no, telephone and fax number of the participant along with the details of mode of payment of fee, addressed to : [pe.esci@gmail.com](mailto:pe.esci@gmail.com)/ [pe@escihyd.org](mailto:pe@escihyd.org)

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