



## POWER AND ENERGY MANAGEMENT IN INDUSTRIAL UTILITIES ENERGY AUDITING AND POWER SAVING MANAGEMENT

(1-3 Feb 2018 at Nagpur)

### Introduction:

Electrical utilities such as Pumps, Fans, Blowers, Compressors, Cooling towers, Lighting systems etc are major consumer of electrical energy in any industry .

Government of India under "Urza daksh Bharat, Unnat bharat plan" has set a 11 point action plan to reduce energy intensity between 2016 and 2019 by 7% and triple the energy savings .

As per study report by **Bureau of energy efficiency**, GOI, by there is a huge potential of saving by 20-30% energy by implementing suitable measures. For example just by maintaining a optimum L/G ratio the energy consumption in cooling tower can be reduced by 15-20% .

The aim of subject training is to provide basic hands ON training to participants on various means and measures for energy saving in various electrical utilities .

3 days duration of the training comprising of audio visual training to participants on energy efficiency of various electrical utilities eg Compressors, Cooling towers, pumping systems etc . There shall also be a group activity to carry out energy audit, with the aim to find out energy leakages, of plant equipments followed by discussions . Detailed contents to be covered are mentioned below. Where as we are always open to cover any of the relevant topic raised by participant during training program for the benefit of individual and organization There shall also be a group activity to carry out energy audit, with the aim to find out energy leakages, of plant equipments followed by discussions .

### Objective:

To impart knowledge about basic concepts and practical approach for improving energy efficiency of electrical utilities viz Compressors, Cooling towers, Fans, Blowers, Refrigeration and air conditioning systems, Power distribution system etc.

### Learning outcome:

Trainees would be able to identify energy wastages occurring in electrical utilities and chalk out and implement action plans for reducing the same, thus optimizing the energy efficiency of the system.

### Benefit to Organisation:

3.2.1 Reduced operating cost due to improved energy efficiency.

3.2.2 Improved health of the equipment.



## Deliverables of the program:

1. To impart basic knowledge about energy efficiency of various electrical utilities and methods to conduct efficiency study.
2. To provide **HANDS ON** training in conducting energy efficiency study for electrical utilities in plant .
3. To demonstrate through actual site measurements the saving potential and actual savings achieved by implementing suitable measures .

## Target Participants:

Graduate engineer trainees , engineers , middle management level professionals with electrical and mechanical background .

## Training Contents/Delivery schedule:

1. Introduction and Objective Setting of 3 Days program. Expectation discussion.
2. Pre Test.
3. Energy Management and Audit Action planning- Calculation and Energy saving.
4. Energy efficiency of electrical power distribution systems, Fans, Motors & Transformer, Cables.
5. Energy efficiency of Cooling towers, Pumping systems, blowers & Compressors.
6. Energy efficiency of Air conditioning and refrigeration systems.
7. Plant illumination or lightening systems.
8. Power factor improvement techniques and applicable approach.
9. Approach towards conducting energy efficiency study of equipments.
10. Post Test.
11. Feedback, Assessment and Certificate distribution.

## Registration:

**Dates of the program:** 1-3 Feb 2018 at Nagpur.

**Participation fees:** Rs. 24000/- per delegate (Excluding GST@18%, Training program includes training material hard copies, Tea, Lunch & snack, excluding lodging and Boarding)



# Centre For Industrial Solution and Advanced Training

AN ISO 9001:2015 CERTIFIED

(Technical- Electrical/Mechanical/Automation/Chemical, Behavioral & Soft Skill, Safety, Business Excellence, Safety & Energy Audit)

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**Payment:** ECS/NEFT/DD in favor of "Centre for Industrial Solution and Advanced Training"  
Payable at Nagpur, Maharashtra, India. Account No: 0509102000003353 Bank: IDBI, Wardha-442001, MS, India; IFSC Code: IBKL0000509; Swift Code IBKLINBB007; MICR Code 442259001.

**Venue:** *KEC International Training Centre, Butibori, Nagpur, MH (18KM from Airport)*

**For Registration, please do contact to,**

*We prefer on line Registration through our web [www.cisat.co.in](http://www.cisat.co.in).*

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**CONTACT FOR ANY IN-HOUSE TRAINING PROGRAM AT YOUR PLANT OR LOCATION.**

Mrs Rupali, Director Business Development

**Centre For Industrial Solution and Advanced Training**

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(Technical- Electrical/Mechanical/Automation/Chemical, Behavioral, Soft Skill, Safety, Out Bound training, Business Excellence, Safety Audit, Energy Audit, Automation Solution)

**Branch Office:** A-306 Creative Home Apartment, Friends Colony, Anupam Society, Nagpur-440015, MS, India.

Web: [www.cisat.co.in](http://www.cisat.co.in); Email: [cisat.nagpur@gmail.com](mailto:cisat.nagpur@gmail.com) ; Contact: +91- 7709012815 (Branches: Thane/Pune/Nagpur/Bhilai/Wardha)

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Training Calendar Jan 2018 - March 2018						
Sr No	Month	Name of the Program	Date	Duration in Days	Fees in INR +GST	Location
ELECTRICAL ENGINEERING						
1	Jan	Electrical Power System protection; Relay Setting and Coordination	18-20 Jan	3	27000	Nagpur
2	Jan	Design of a reliable and cost effective Advanced Electrical Power system for Industrial Applications	23-25 Jan	3	27000	Hyderabad
3	Feb	Power and Energy Efficiency Management in Industrial Utilities & Power Factor Improvement	1-3 Feb	3	24000	Nagpur
4	Feb	Electrical Safety; International Standards & Auditing	5 Feb	1	8000	Kolkata
5	Feb	HT/LT Motor; Electrical Drives; VVVF; Soft Starter (Fundamental; Operation, Maintenance; Troubleshooting; CBM; Hands ON, Parameter	6-8 Feb	3	27000	Kolkata
6	Feb	Power System protection; Relay Setting and Coordination	19-21 Feb	3	27000	Goa
7	Feb	Power Factor Improvement Techniques: Design & Industrial Applications	26-27 Feb	2	20000	Banglore
Mechanical/Production Engineering						
1	Jan	Hydraulics & Pneumatics and Valve: Operation, Maintenance, Troubleshooting and PPMT	9-10 Jan	2	18000	Nagpur
2	Feb	Pump and Air Compressor: Operation, Maintenance, Troubleshooting and PPMT	9-10 Feb	2	18000	Kolkata
3	March					
Performance Improvement and Best Maintenance Practices						
1	Jan	Reliability Centered Maintenance (RCM)	12-13 Jan	2	18000	Nagpur
2	Jan	World Best Engineering and Modern proactive Maintenance Practices for safe, reliable, compliant and competitive performance.	29-31 Jan	3	27000	Nagpur
3	Feb	Predictive Preventive Maintenance Techniques and NDT	16-17 Feb	2	20000	Goa
Process; INSTRUMENTATION, AUTOMATION AND CONTROL						
1	Jan	Pipeline & Terminal Valves, Control Valves & Actuators: Operations & Maintenance, Selection	16-17 Jan	2	18000	Pune
2	Feb	PLC, SCADA & Engineering Applications (Programming; Parameters; Communication; Case Studies & Plant Applications)	12-15 Feb	4	28000	Kolkata

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