

# Power and Energy Management in Industrial Utilities

## Energy Auditing, Power saving Techniques and Management

(26-28 Feb 2020 at Kolkata)

### 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 detailed concepts and practical approach for improving energy efficiency of electrical and mechanical utilities viz compressors, cooling towers, fans, blowers, refrigeration and air conditioning systems, power distribution system etc in a plant.

### Learning outcome:

Trainees would be able to identify energy wastage's 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 Organization:

3.2.1 Reduced operating cost due to improved energy efficiency.

3.2.2 Improved health of the equipment.

### Deliverable s of the program:

1. To impart detailed knowledge about energy efficiency of various electrical and Mechanical utilities and methods to conduct efficiency study for various Industries.
2. To provide **hands on** case studies in conducting energy efficiency in a plant.



3. To demonstrate through actual site measurements, the saving potential and actual savings achieved by implementing suitable measures. To demonstrate various instruments for actual energy measurement.

**Target participants:** Graduate Engineers , middle and Senior level management professionals with electrical and mechanical Engineering background .

**Training Contents/Delivery schedule:**

1. Introduction and objective setting for 3 days program. Expectation discussion.
2. Pre-test.
3. Energy management and audit action planning- calculation and energy saving in detail.
4. Energy efficiency of electrical power distribution systems, Fans, Motors, Transformer, Cables etc.
5. Energy efficiency of Cooling towers, Pumping systems, Blowers & Compressors.
6. Energy efficiency of Air Conditioning and Refrigeration Systems, Chillers.
7. Plant Illumination or Lightning Systems.
8. Power factor Improvement Techniques and applicable approach.
9. Approach towards conducting energy efficiency study of equipment's.
10. Many case studies and Effective report writing. Open Discussion.
11. Post test, feedback, assessment and certificate distribution.
12. Preparation guidance for Energy Auditor examination for success.

**Registration:**

**Dates of the program:** 26-28 Feb 2020 at Kolkata.

**Participation fees:** INR 27000/- per delegate (Excluding GST@18%, Training program includes Training material soft/hard copies, Tea, Lunch & snack, excluding lodging and Boarding)

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

**Venue:** To be confirmed by an email.

**Expert for the programme:**

1. **Shri. Sachin Deshpande**

**Credentials:** B.E. (Mech), M.Tech (Energy), Solar PV Syst Tech. ( I I T Chennai), Accredited Energy Auditor (BEE, Govt of India), Lead Auditor, ISO 50001 (BSI), Chartered Engineer, FIE, FIV, Sr. Consultant (Ministry of Power, Regulatory Compliance) . **Patents:** 2 Nos, Solar. **Faculty:** PCRA (Ministry of Petroleum), Empanelment: MEDA, GEDA, MIT (USA), Sugar Commissioner. **Experience:** Total 26 years, out of which 13 Years in Solar Thermal and PV project Design and Installation. Carried out more than 600 Energy Audits in India and



China, Thailand, Malaysia, etc. in Sectors like Power, Steel, Pharma, Textile, paper, Fertilizer, Railways, etc..  
Recieved State level Best Energy Auditor Award in 2017 and 2018 by MEDA.

**Other Experience:** Solar PV DPRs, PMC Already carried out for more than 50 MW, Boiler performance testing as per BS-845, Detailed water Audit, Compliance Monitoring for MERC. Training- More than 300 full day seminars for GEDA, PCRA, ARS, Power plants, VJTI, NITs, IITs, Industrial Associations, UNIDO, Govt of Thailand, etc

**Expert for the programme:**

- 2. Shri. Bhavesh Patel; Mechanical Engineer, Energy Auditor; 25+ Yrs Industrial Experience.**

**For Registration,**

- 1. We prefer on line Registration through our web [www.cisat.co.in](http://www.cisat.co.in).**
- 2. In other case do send confirmation via email to Vikas 00-91-7709012815; [vikas@cisat.co.in](mailto:vikas@cisat.co.in); [cisat.nagpur@gmail.com](mailto:cisat.nagpur@gmail.com); or you can do call Vikas +91-7709012815 or 8669546332**

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**TERMS & CONDITIONS FOR Workshop:**

- All training courses will require a minimum of 6 participants.
- In the event of cancellation of a course, we will endeavor to inform all candidates a week before the course is due to take place. In such case all course fees paid will be reimbursed in full or the payment will be transferred in full to another course.
- CISAT shall not accept liability for any consequential loss and shall have no liability to reimburse any other costs that may have been incurred, including transport costs, accommodation etc.
- Special arrangements can be made for group bookings.
- Certificate of participation will be issued when payment has been received in full.

**Contact for any In-house Training Program at your plant or location.**

- HR Solutions and complete professional Training (HR/Soft Skill/Technical- Electrical/Mechanical/Automation /Process/Certification/Out Bound/Safety/Manufacturing excellence- TPM, TQM, 5S, Six Sigma etc)
- Course Content and presentations development – Customized to your company requirement.
- E-learning Development, Virtual Learning
- Online LMS or HR Automation system- Automated
- Employee Certification, skill or competency mapping and testing, Mentoring etc. From workers to Management level employees.