



*Training Course:
Electrical Energy Saving in Industrial &
Commercial Utilities*

*18 - 22 October 2026
Cairo (Egypt)*

Training Course: Electrical Energy Saving in Industrial & Commercial Utilities

Training Course code: EN236624 From: 18 - 22 October 2026 Venue: Cairo (Egypt) - Training Course Fees: 4410 € Euro

Introduction

The Electrical Energy Saving in Industrial & Commercial Utilities training program is designed by Global Horizon Training Center to provide participants with practical knowledge and effective techniques for improving electrical energy efficiency in industrial and commercial facilities.

The program focuses on identifying electrical energy losses, improving the efficiency of electrical systems and equipment, reducing unnecessary energy consumption, and developing practical energy-saving measures. Participants will explore electrical loads, power quality, motors, transformers, lighting systems, HVAC systems, power factor, energy monitoring, and energy management practices.

The training combines essential technical concepts with practical approaches that can be applied in industrial plants, commercial buildings, offices, facilities, and utility systems.

Objectives

By the end of the training program, participants will be able to:

- Understand the fundamentals of electrical energy consumption and efficiency.
- Identify major sources of electrical energy waste in industrial and commercial facilities.
- Evaluate electrical loads and consumption patterns.
- Apply techniques for reducing energy consumption and operating costs.
- Improve the efficiency of motors, transformers, lighting, HVAC, and other electrical systems.
- Understand power factor and its impact on electrical energy costs.
- Identify electrical losses and opportunities for energy optimization.
- Use basic energy monitoring and measurement techniques.
- Develop practical electrical energy-saving measures.
- Support the implementation of energy-efficiency initiatives within their organizations.

Course Methodology

The program uses a practical and interactive training approach, including:

- Instructor-led presentations and technical explanations.
- Practical examples from industrial and commercial facilities.
- Case studies and energy-saving scenarios.
- Group discussions and problem-solving activities.
- Simple calculations and practical exercises.
- Analysis of electrical energy consumption.
- Review of energy-efficiency improvement opportunities.
- Questions, discussions, and knowledge-sharing sessions.

Organizational Impact

Organizations can benefit from the program through:

- Reduction of electricity consumption and operating costs.
- Improved efficiency of electrical equipment and utility systems.
- Identification of avoidable electrical energy losses.
- Improved power factor and electrical system performance.
- Better energy monitoring and consumption control.
- Increased awareness of energy-efficient operating practices.
- Improved maintenance and utilization of electrical equipment.
- Development of practical energy-saving initiatives.
- Contribution to organizational sustainability and energy-management objectives.

Target Audience

This program is suitable for:

- Electrical Engineers and Technicians.
- Maintenance Engineers and Supervisors.
- Facility and Utility Managers.
- Energy Managers and Energy Engineers.

- Operations and Maintenance Personnel.
- Building and Facilities Management Teams.
- Industrial Plant Engineers.
- HVAC and Mechanical Engineers involved in energy management.
- Sustainability and Environmental Professionals.
- Project Engineers and Technical Managers.
- Professionals responsible for energy costs and utility operations.

Outlines

Day 1 - Fundamentals of Electrical Energy Efficiency

- Introduction to Electrical Energy Management
- Electrical Energy Consumption in Industrial and Commercial Facilities
- Understanding Electrical Loads and Load Profiles
- Major Sources of Electrical Energy Consumption
- Identifying Electrical Energy Losses and Waste
- Energy Efficiency vs. Energy Conservation
- Basic Electrical Energy Measurements
- Understanding kW, kWh, kVA and Power Factor
- Introduction to Energy Performance Indicators
- Practical Examples of Electrical Energy-Saving Opportunities

Day 2 - Energy Efficiency of Electrical Systems and Equipment

- Energy Efficiency of Electric Motors
- Motor Loading and Efficient Motor Operation
- Variable Speed Drives and Energy Savings
- Transformers and Transformer Losses
- Efficient Transformer Operation

- Electrical Distribution System Losses
- Cable and Connection Losses
- Efficient Pump and Fan Operation
- Standby and Idle Equipment Energy Consumption
- Practical Energy-Saving Measures for Electrical Equipment

Day 3 - Lighting, HVAC and Commercial Utility Efficiency

- Energy Consumption in Commercial Buildings
- Efficient Lighting Systems
- LED Lighting and Lighting Controls
- Occupancy Sensors and Automatic Controls
- HVAC Electrical Energy Consumption
- Efficient Operation of Air-Conditioning Systems
- Fans, Pumps and Air-Handling Systems
- Temperature and Operating Controls
- Reducing Energy Waste During Non-Operating Hours
- Practical Energy-Saving Opportunities in Buildings

Day 4 - Power Factor, Power Quality and Energy Monitoring

- Understanding Power Factor
- Causes and Effects of Low Power Factor
- Power Factor Correction
- Capacitor Banks and Energy Efficiency
- Introduction to Power Quality
- Voltage, Current and Harmonic Issues
- Electrical Energy Monitoring and Metering
- Energy Meters and Data Collection

- Establishing Energy Consumption Baselines
- Identifying Abnormal and Excessive Energy Consumption

Day 5 - Energy Auditing and Developing an Energy-Saving Plan

- Introduction to Electrical Energy Auditing
- Energy Audit Process and Key Steps
- Identifying Energy-Saving Opportunities
- Measuring and Analyzing Energy Consumption
- Prioritizing Energy-Efficiency Projects
- Estimating Energy and Cost Savings
- Simple Payback and Investment Considerations
- Developing an Electrical Energy-Saving Action Plan
- Monitoring and Verifying Energy Savings
- Practical Case Study: Developing an Energy-Saving Plan for an Industrial/Commercial Facility
- Course Review and Key Takeaways

Registration form on the Training Course: Electrical Energy Saving in Industrial & Commercial Utilities

Training Course code: EN236624 From: 18 - 22 October 2026 Venue: Cairo (Egypt) - Training Course Fees: 4410 € Euro

Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

Delegate Information

Full Name (Mr / Ms / Dr / Eng):
Position:
Telephone / Mobile:
Personal E-Mail:
Official E-Mail:

Company Information

Company Name:
Address:
City / Country:

Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng):
Position:
Telephone / Mobile:
Personal E-Mail:
Official E-Mail:

Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
- ☐ Please invoice me
- ☐ Please invoice my company

Easy Ways To Register

Telephone:
+201095004484 to
provisionally reserve your
place.

Fax your completed
registration
form to: +20233379764

E-mail to us :
info@gh4t.com
or training@gh4t.com

Complete & return the
booking form with cheque
to: Global Horizon
3 Oudai street, Aldouki,
Giza, Giza Governorate,
Egypt.