



Fundamentals of Energy Management Training (FEMT)

The Fundamentals of Energy Management Training (FEMT) provides the basics to be able to understand holistic energy management that encompasses electrical, mechanical and thermal system. Prepare for further training in the energy engineering professions.

FEMT was developed in South Africa by South Africans to provide a platform for persons wishing to enter the energy industry, or persons wishing to re-skill themselves in the fundamental basics that make up holistic energy management before embarking on further AEE training, specifically assisting with preparation for Certified Energy Manager (CEM®) and Certified Energy Auditor (CEA™) training.

The training provides full theoretical explanations accompanied by sufficient practical exercises to ensure delegates become as proficient as possible in the fundamental concepts that make up holistic energy management. There is no examination, but examination techniques and advice are provided to assist those in planning for further AEE programmes where there are examinations.

TRAINING PROGRAMME OUTLINE

- The basics of units, pressure, temperature, etc.
- Types of energy and laws
- Efficiency
- Mechanical energy basics

- Pumps, fans, compressed air
- Electricity basics
- Power factor, electric motors, lighting
- Thermal energy basics and energy balance
- Charts and tables
- Heat flow and insulation
- Building envelope
- Boilers and steam
- Refrigeration and heat pumps
- Energy management auditing
- Measurement and Verification
- Identifying energy management and saving opportunities

COURSE OUTCOMES

On completion of the FEMT course you will be able to identify energy saving opportunities, make purchasing decisions of which technologies and products can benefit your organisation, and be more prepared for future AEE training and examinations.

DELEGATE PROFILE

- Persons that need to find energy savings opportunities in their organisations and need to start learning more about energy management and energy saving from a credible trainer.
- Persons that are not particularly technically strong, but have to operate and understand the energy management systems and processes that are or need to be implemented.
- Persons wishing to qualify as a CEM®, or any of the other AEE programmes, and need additional preparation to successfully complete these courses and examinations.
- Persons that need to grasp some of the basics in the field of energy management as well as electrical, mechanical and thermal energy.

BASIC SKILLS REQUIRED

A basic understanding of mathematics is required to enable practising the calculations explained and demonstrated during FEMT.

FURTHER TRAINING OPTIONS

Understanding the fundamentals of energy management provides a platform into the following areas of the energy market for which the EnTF provides training:

- **The Certified Energy Manager (CEM®)** training program will provide sufficient knowledge to achieve within these markets; energy management, energy projects, energy baselines, managing the use of all resources from renewables to fuels, gas and water, energy champions, managing carbon emissions - in industries such as commercial buildings and facilities management, architecture, town planning, Energy Services Companies (ESCOs), consulting engineering firms, municipalities, manufacturing plants, logistics companies, mines, etc.
- **The Certified Measurement and Verification Professional (CMVP®)** training program is based on the International Performance Measurement & Verification Protocol (IPMVP) and will enable transparent and credible energy savings reporting, energy baselines, transparency in energy savings reporting, tax incentives, energy accounting, energy financing – in industries such as financial service and funding providers, accounting firms, M&V teams, project management and consulting engineering firms, independent M&V specialists, Energy Services Companies

(ESCOs), companies that deal with energy savings reporting, etc.

- **The Certified Energy Auditor (CEA™)** training programme provides in-depth energy auditing knowledge for building energy auditing, industrial plant energy auditing, finding Significant Energy Users (SEUs), identifying energy savings opportunities, energy reporting and reviews – in any industry that uses a resource to produce a product or deliver a service from a commercial building or house to a power plant site.
- **The Certified Renewable Energy Professional (REP™)** provides a recognised qualification and training programme to achieve holistic energy management whilst incorporating cost-effective renewable energy resources and covers alternative and renewable energy sources, renewable solutions for maximum ROI – in the alternative energy industries such as wind, solar, thermal, PV, biofuels, waste-to-energy, fuel cells, hydro, ocean thermal, etc.

RECOGNITION

Engineering Council of South Africa (ECSA)

3 Continuing Professional Development (CPD) credits for ECSA registration.

Association of Energy Engineers (AEE)

4.2 credits for Continuing Professional Competency (CPC) demonstration to re-certify on another AEE certification program.

Attendance certificate

Attendance certificate will be issued to all delegates that attend the full duration of the training course. (85% or higher attendance required.)

COSTS*

R8 700.00 (excl. VAT)

Includes: 3-day day training course programme, manual(s), lunch, tea and coffees

Duration: 3 days of training

Examination: There is no examination

BOOKINGS

Lagon to www.energytrainingfoundation.co.za to register online or download a manual registration form and email it to training@entf.co.za.

* Terms and conditions

1. First paid first served policy applies for booking security
2. Booking security requires one of the following to be received six (6) working days prior to the commencement of the course:
 - a. Full payment cleared in bank with proof of payment supplied
 - b. A deposit of 25% with proof of payment supplied.
 - c. A purchase order for the full amount of the invoice.
3. Fees include coffee/tea/juice on arrival, mid-morning coffee/tea with pastries, mid-afternoon coffee/tea with biscuits, and lunch. For training the fee includes the black and white text books, course fee and one year membership of the SAEEC. For examinations the fee includes the examination fee, marking fee, certification application fee, and 1 year membership of AEE for first certifications.
4. It is the responsibility of the candidate attending the course to arrange their own travel, accommodation, breakfast and dinner.
5. Policy on international candidates
 - a. Invoices exclude withholding and country-specific taxes. Should these be leveraged by your country government, we reserve the right to invoice the responsible entity/person to recoup the costs.
 - b. VAT is payable for candidates attending training in South African borders, this may be claimed on departure from South Africa using the tax invoice.
6. Policy on cancellations
 - a. Cancellations received within five (5) working days prior to the first day of training will carry a 25% cancellation fee. No course material will be supplied. For examinations a rescheduling fee of R650.00 will be leveraged.
 - b. Cancellations received six (6) working days prior to the first day of training will receive a full refund.
7. Policy on accounts not in good standing
 - a. The candidate in attendance at the course ultimately remains responsible for payment of the outstanding account and providing the proof of payment thereof.
 - b. In the event that a candidate, or the candidate's organisation is not in good standing with us we reserve the right to withhold:
 - Certificates of Attendance
8. The Energy Training Foundation (EnTF) is a division of Energy Cybernetics (Pty) Ltd, an EOH company, and the invoice will be made out by Energy Cybernetics.
9. Proforma invoices will be supplied, Tax Invoices will be raised on request but these are payable within 30 days of issue.
10. Right of Admission Reserved.

About the Energy Training Foundation

The EnTF offers tailor-made training courses to fulfil the energy training needs of the industrial, commercial, mining, government, utility, building sector of Africa. EnTF is the sole approved training partner of the AEE for the Southern African region and Indian Ocean Islands, the training partner of the SAEEC and the AEPEA, is an EWSETA accredited training provider, with course accreditation for CPD registration requirements with ECSA.

Programs offered by EnTF include customised training programs, mentorship and stipend management programs, locally developed training and internationally accredited certification programs. The most popular: Certified Energy Manager (CEM), Certified Energy Auditor (CEA), Certified Measurement and Verification Professional (CMVP), Certified Water Efficiency Professional (CWEP), Certified Renewable Energy Professional (REP), Certified Business Energy Professional (BEP), Certified Carbon Reduction Manager (CRM), Fundamentals of Energy Management (FEMT), Basic Principles of Energy (BPO), Measurement and Verification Standard Training (MVST), Nelson Mandela University PV Technologies short learning program (PVTECH).

Energy Training Foundation is a division of Energy Cybernetics (Pty) Ltd, an EOH company.

For more information: • info@entf.co.za • 084 622 4770/084 011 5500 • www.entf.co.za