

Certified Energy Manager

Awarded by the Association of Energy Engineers



This course is available for *virtual* delivery
– please contact us for further details

1 face-to-face training day typically translates into 2 to 4 virtual sessions per day, this is determined by the specific course content. Number of sessions and specific session times will be confirmed in advance of course delivery.

Snapshot

Duration	Six day training programme
Course Times	9.00am - 5.00pm (Days 1-5), 9.00am - 2.00pm (Day 6)
Public Price	€1,675 (includes course documentation, lunch and refreshments)
Accreditation Fees	€500 (AEE Exam fees & Certification)
Total Public Price	€2,175
In-House Price	Available on request

Introduction

Since its inception in 1981, the Certified Energy Manager (CEM®) credential has become widely accepted and used as a measure of professional accomplishment within the energy management field. Simply put, the designation CEM, which stands for Certified Energy Manager, recognises individuals who have demonstrated high levels of experience, competence, proficiency and ethical fitness in the energy management profession. Certification as a CEM approves individuals to act as Lead Assessors for the purposes of ESOS in the UK.

What's covered?

- Need for Energy management
- Conducting an energy audit
- Energy audit instrumentation
- Energy accounting & benchmarking
- HVAC systems and improvements
- Boilers & Thermal systems
- Motors & drive applications and compressed air systems
- Maintenance
- Commissioning
- Economical analysis and life cycle costing
- Alternative Energy
- Energy Efficient Buildings
- Energy Codes & Standards



- Energy Purchasing
- Energy rate structures
- Thermal energy storage
- Electrical systems
- Energy management systems and effective planning
- Industrial systems, co-operation and CHP
- Building Automation systems
- Lighting Systems and system improvements

This course is presented in a lecture and discussion format.

Who Should Attend?

Engineering Managers, Energy Managers, Design Engineers, Facility Managers, Energy Team Leaders, Commissioning Personnel, Energy Team members, Energy Consultants and Senior Technicians. Members of Engineers Ireland who attend this course may claim for CPD hours from Engineers Ireland.

Core Eligibility Requirements

A delegate wishing to achieve CEM certification must have:

- Four years engineering degree coupled with three years energy related experience
or
- Four years business related degree coupled with five years energy related experience
or
- Two years technical degree (Level 6 on the National Framework Qualification) coupled with eight years energy related experience (Engineering related Certificate qualification or time served electrician/ fitter)
or
- Ten or more year's documented and verifiable energy related experience - backed up with letters from employers.

It is possible for a person with the correct academic qualification but not having the relevant energy related experience, to undertake the course and the examination. On passing the exam they will be awarded the "Energy Manager in Training" certification. Once the relevant experience has been acquired, the person will receive the CEM certification without having to retake the examination. Individuals competencies will be assessed in line with the BSI published PAS 51215 to ensure that they have the relevant experience to meet the requirements.

For applicants whose first language is not English, SQT recommends a minimum English language competency of IELTS 5.5 (or equivalent) for successful completion of this programme. It is important to note that learners are not expected to have an IELTS or equivalent examination complete. Potential delegates are expected to [self-assess](#) their English language competency against the IELTS Band scores which can be found in [this](#) document.



Course Accreditation/Assessment

The Certified Energy Manager qualification is awarded by the Association of Energy Engineers, based in the USA, but with chapters in 81 countries worldwide. The Certified Energy Manager course has also been approved by Engineers Ireland as one of its CPD courses.

In addition persons awarded CEM Certification undertaking this course and examination (all in SI Units) will be automatically approved as Lead Energy Assessors for the purpose of the UK Energy Savings Opportunity Scheme (ESOS)

Course learning will be assessed in a comprehensive open book examination

Delegates who meet the core requirements, complete the course, pass the examination and awarded the “Certified Energy Manager” qualification by the Association of Energy Engineers (www.aeecenter.org) and will also receive one year’s free membership with AEE. They will also be automatically qualified to act as Lead Assessors for the purposes of the UK Energy Savings Opportunity Scheme (ESOS) Legislation.

What will I learn?

Participants achieve the following learning outcomes from the programme;

- Assess the energy consumption of an organisation and identify the areas of significant energy use.
- Understand the principles behind energy purchasing and tariff mechanisms and to analyse energy bills within an organisation.
- Understand the common terminology and units used in energy engineering
- Properly understand the issues related to operation and maintenance of key electrical and mechanical plant and properly understand the principles of operation of this equipment.
- Identify the relevant instruments and tools required to carry out an energy audit within an organisation
- Plan an energy audit of an organisation to ensure the areas of significant energy use are addressed and ordered to identify end use in advance of supply.
- Apply the principles of benchmarking the organisation against other similar organisations and utilise key metrics to assess energy performance in area of significant energy use.
- Identify the key requirements for a monitoring, targeting and reporting system within an organisation.
- Identify the key opportunities for energy improvements related to the areas of significant energy use within an organisation using sound audit principles.
- Assess the potential energy savings related to the energy savings identified in terms of energy and monetary values.
- Apply sound financial principles to energy management projects including life cycle costing and savings to investment analysis to allow rational prioritisation of energy projects towards implementation.
- Apply the appropriate approach towards the verification of savings from energy savings projects including the international performance measurement & verification protocol (IPMVP).
- Identify the key issues related to energy in a range of related activities such as building management and control systems, commissioning and maintenance and how to ensure that energy management becomes integrated into the activities

- Engage and interact in a structured energy management environment with a full understanding of the ISO 50001 energy management standard approach.
- Undertake the role as an ESOS Lead Assessor under UK ESOS Legislation

Expert Course Tutors - Profile & Testimonials

[Ian Boylan](#)

In-House Courses

For In-House courses, the tutor will contact you in advance to discuss the course programme in more detail in order to tailor it specifically for your organisation.

Course Manual

Delegates will receive a very comprehensive course manual.

Rev 12

