



## CERTIFIED ENERGY MANAGER® (CEM®) CANDIDATE HANDBOOK

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## SCOPE

The Certified Energy Manager (CEM) is an individual who optimizes the energy performance of a facility, building or industrial plant. The CEM is a systems integrator for electrical, mechanical, process and building infrastructure, analyzing the optimum solutions to reduce energy consumption in a cost-effective approach.

Certified Energy Managers demonstrate competency in the following areas that are included in the CEM Body of Knowledge to gain certification: codes and standards, energy accounting and economics, energy audits and instrumentation, electrical power systems and motors, HVAC systems, industrial systems, building envelope, CHP systems and renewable energy, fuel supply and pricing, building automation and control systems, thermal energy storage systems, lighting systems, boiler and steam systems, maintenance and commissioning, energy savings performance contracting, and measurement & verification.

## OBJECTIVES

- To raise the professional standards of those engaged in energy management.
- To improve the practice of energy management by encouraging energy managers in a continuing program of professional development.
- To identify persons with acceptable knowledge of the principles and practices of energy management related disciplines and laws governing and affecting energy managers through completing an examination and fulfilling prescribed standards of performance and conduct.
- To award special recognition to those energy managers who have demonstrated a high level of competence and ethical fitness for energy management.

## ELIGIBILITY

Energy managers with one the following prerequisites may apply to sit for exam:

A Four-Year Engineering or Architecture degree or Professional Engineer (P.E.) or Registered Architect (R.A.) with at least three years of experience in energy engineering/management

OR

A Four-Year Technology, Environmental Science, Physics, or Earth Science degree with at least four years of experience in energy engineering/management

OR

A Four-Year Business or related degree with at least five years of experience in energy engineering/management

OR

A Two-Year Energy Management associate degree with at least six years of experience in energy engineering/management

OR

A Two-Year Technical degree with at least eight years of experience in energy engineering/management

OR

Ten years or more verified experience in energy engineering/management

**Acceptable experience is full-time direct energy management work. Higher education, part-time internships, and research positions are not acceptable.**

## STATEMENT OF NON-DISCRIMINATION

AEE endorses the principles of equal opportunity. Eligibility criteria for examination and certification as a Certified Energy Manager are applied equally to all individuals regardless of age, race, religion, gender, national origin, veteran status, sexual orientation, or disability.

## STATEMENT OF IMPARTIALITY

AEE's CEM Certification Department adheres to principles of impartiality in all its dealings. The CEM Department shall act impartially towards all applicants, candidates, and certificants.

## THE REQUIRED BODY OF KNOWLEDGE / STUDYING FOR THE EXAM

The effective practice of energy management requires an in-depth knowledge of a wide variety of subjects. All applicants must take a required approved preparatory seminar before sitting for the certification exam. For certification purposes, however, the candidate must also demonstrate to the satisfaction of the Certification Board the knowledge and ability to apply the essentials of energy management. To aid candidates in preparing for the examination, the Certification Board makes available a bibliography of suggested reference materials and a study guide (Refer to [U.S. CEM Body of Knowledge & Study Guide](#)).

The most effective way to “study” for the exam is to practice – practice solving problems, practice working within the exam’s time constraints, and studying the materials covered in the exam.

There are many things you can do to help yourself prepare for the exam.

- Review the reference books and videos
- Practice the questions in the [U.S. CEM Body of Knowledge & Study Guide](#)
- Take the self-evaluation exam, available for purchase on the CEM website: <http://www.aeecenter.org/cemresources>
- Review the body of knowledge in the [U.S. CEM Body of Knowledge & Study Guide](#)
- Practice basic algebra calculations

## PROCEDURES

1. **Confirm Eligibility:** Confirm you meet the eligibility requirement. Refer to number 2 in this candidate handbook. Since certification is based on education, experience and passing the examination, it is important that the applicant understands the eligibility requirements and has attained the prerequisite to qualify for certification.
2. **Register for Training:** Register for a required approved preparatory seminar. To view seminar options, visit [www.aeecenter.org/CEM/training](http://www.aeecenter.org/CEM/training).
3. **Submit Application:** By submitting the application you’re applying for the certification and registering for the exam at a live location or through remote proctoring. The application should be received by the certification department four weeks prior to the desired exam date. If a candidate is unable to submit an application before the deadline, an on-site exam waiver may be completed at the live exam site location. If an exam waiver is completed, the application is still required to be submitted.

The Application Form provides an organized method for documenting professional and educational background. The Personal Data Form is divided into the following three parts:

- Contact Information – business and personal email, address and phone number.
- Education and Professional Registration - name and location of each college or university from which you have earned a degree and any professional registrations (i.e. PE or RA).
- Experience/Employment in Energy Management – list of employers including a description of job functions held for those periods of employment which qualify you for CEM.

The applicant is requested to list on the Application Form all pertinent information in these categories for evaluation by the CEM Board. All applicants must complete the application; a resume does not replace the application.

When applying, you do not need to send supporting documentation. However, you will be required to send supporting documentation if your application is selected for a random audit. A specified percentage of applications are randomly selected for audit. AEE conducts application audits to confirm the experience and/or education documented on certification applications. The purpose of the audit is to enhance the credibility of the certification program and of the certification holders.

4. **Application Review:** Once we receive your application, we'll verify that you meet the eligibility criteria and that your experience and/or education is acceptable. Typically, the application review period will take 5–10 days. Once the application review is complete, we'll email you to confirm the upcoming certification exam or request additional information. If we have any questions or issues with your application, we'll notify you via email.
5. **Application Random Audit:** If your application is selected for a random audit, we'll notify you by email with the instructions and documentation needed to complete the verification of experience and/or education.

Based on the eligibility requirement, the number of years of required experience to be verified will vary. Past employers may need to be complete the employment verification form. If you are self-employed or are a principal owner of a company, three client verifications are required in the place of employment verification. **All employment verification and/or client verification forms should be completed by the employers and/or clients before sending to AEE. AEE does not send requests to employers or clients.** *Once forms are received by AEE, we may contact employers and/or clients directly to confirm and verify the information on the form is correct.*

6. **Remote Proctored Testing Information:**  
Your application along with the exam fee should be approved by AEE prior to sitting for the exam. You will receive a letter once AEE has approved your application. At that time, you may log in to the testing providers website to begin the exam scheduling process. Please do not contact the testing provider regarding the status of your application. Once the application is complete and the exam is passed, all applications are sent to the CEM Board for final approval. Only after this approval is certification granted. For more information on Remote Proctoring Procedures, please visit: <https://www.aeecenter.org/remote-proctoring>.
7. **Examination Score:** Candidates must obtain a minimum score of 700 points on the CEM examination. Examination scores will be kept on file by the Certification Director for a period of 3 years. Applicants have 3 years to follow up and complete his/her CEM file; after 3 years, applicants must restart the process by taking another approved preparatory training, resubmitting the application and retaking the CEM exam.
8. **Final Board Review:** To be awarded the CEM designation, candidates must submit a completed application, meet eligibility requirements, and obtain a minimum score on the CEM examination. Once the application is complete and the CEM exam is passed, all applications are sent to the CEM Board for final approval. Only after Board approval is certification granted and the CEM # issued.

## APPEALS POLICY

An appeal is a formal request for reconsideration of an adverse decision made by the CEM Board or its representatives related to an individual's achievement of a certification. Candidates may appeal the results of eligibility determination or the examinations within 60 days of the date of the results. The appeals process and an application for submitting an appeal is as follows:

- If a candidate has a problem with AEE's determination of their eligibility or with the examination, they should first send an email to the CEM Director to request reconsideration of an adverse decision.
- If the candidate is unsatisfied with the CEM Director's reconsideration of the adverse decision, they must request an appeal form from the CEM Director. Once the Appeals Form has been completed, it must be forwarded to the CEM Director, who will forward the appeal to the Appeals Board
- Upon receiving the appeal, the Appeals Board has forty-five (45) days in which to consider the appeal. Candidates will be notified of the Appeals Board's decision after forty-five (45) days.

## CERTIFICATION FEES

### Application fee

A fee of \$500.00 dollars is payable with the filing of the application. This includes the CEM application fee and first-time CEM examination. *No application or examination fee refunds are allowed.*

### Retesting fee

For each re-examination, a fee of \$250.00 will be required. *No refunds allowed.*

### Renewal fee

Three-year renewal fee: \$300.00

Reinstatement fee: \$350.00.

*No refunds allowed.*

## INCOMPLETE APPLICATIONS

Incomplete applications will remain on file with the Certified Energy Manager Certification Department for a period of three (3) years. After three years, application materials will be destroyed.

## THE CEM EXAMINATION

The applicant must complete a four-hour exam. Live Seminar dates and locations are available on our website at <http://www.aeecenter.org/cemresources>. Applicants must register separately to attend the associated live seminar. An Examination Administrator will proctor the examination. This Administrator may be an association associate, an educator, an approved testing expert or agency, or whomever the Certification Director deems appropriate based on pre-approval.

The exam is also available online by remote proctor. The examination can be taken using a personal or business computer with a live proctor monitoring the examination via webcam and computer sharing technology. For more information on the remote proctoring process, visit [www.aeecenter.org/remote-proctoring](http://www.aeecenter.org/remote-proctoring).

The examination questions are based on the body of knowledge accessible in the [U.S. CEM Body of Knowledge & Study Guide](#). Because of the diversity of background and experience of Energy Managers, the examination has 15 different subject sections, all of which are mandatory. The exam consists of multiple choice and true/false questions. This is an open book/open notes exam. In addition, stand-alone, scientific, business/financial, or graphing calculators (i.e., Texas Instruments, Casio, Sharp, etc.) may be used on the exam. The following items are strictly prohibited during the exam: calculator with internet capability, cell phones including use of cell phone calculator, laptop computers, tablets, camera devices, any use of internet/email and AEE reference CDs. Only printed reference materials organized in a binder may be allowed in the exam room. Grading is accomplished by members of the Certification Department and the CEM Board. Candidates are notified of exam results by email within 30 days of the exam date.

**The CEM Examination contains the following mandatory subjects:**

<b>Body of Knowledge</b>	<b>Percent of Exam</b>
Codes and Standards	3%-5%
Energy Accounting and Economics	6%-10%
Energy Audits and Instrumentation	8%-12%
Electrical Power Systems and Motors	9%-13%
HVAC Systems	9%-13%
Industrial Systems	6% -8%
Building Envelope	3%-5%
CHP Systems and Renewable Energy	4%-6%
Fuel Supply and Pricing	2%-4%
Building Automation and Control Systems	7%-11%
Thermal Energy Storage Systems	2%-4%
Lighting Systems	6%-8%
Boiler and Steam Systems	3%-5%
Maintenance and Commissioning	8%-12%
Energy Savings Performance Contracting and Measurement & Verification	3%-5%

## LANGUAGE

The Certified Energy Manager Exam when administered in the United States is only offered in English.

## AMERICANS WITH DISABILITIES ACT

Special arrangements may be provided to candidates with a disability (as defined by Title III of the Americans with Disabilities Act) who submit with their certification application, a written explanation of their needs along with appropriate medical documentation. An ADA request form is available on the CEM website – <http://www.aeecenter.org/cemresources>.

## RESCHEDULING EXAMS

While application and exam fees are nonrefundable, a candidate may reschedule taking a live exam at any time for any reason.

Candidates taking the exam through Remote Proctoring, will need to reschedule by logging in to their account with the Remote Proctoring provider. For exams cancelled/rescheduled less than 24-hours of exam reservation, a \$75 rescheduling fee payable to AEE will be required before the exam can be rescheduled.

## INCLEMENT WEATHER

If any candidate is unable to arrive at a designated exam site because of inclement weather, terrorist acts, a natural disaster, or other unforeseen emergencies beyond control of the candidate as determined by AEE, the candidate will be allowed to take a future examination without being charged a re-examination fee.

If for any reason the exam is unable to be administered, then the examination will be rescheduled within a reasonable time period. Candidates may take the exam at a future administration without being charged a re-examination fee. Candidates will be responsible for their own associated expenses for future testing.

## TEST ADMISSION PROCEDURES

Candidates must report to the test location on time. Sign-in begins at least 30 minutes before the posted exam time. Candidates must present a government-issue photo ID when checking in to take the exam. Candidates who arrive more than thirty minutes late or without a photo ID will NOT be permitted to enter the test center, and their examination fees will be forfeited. Distribution of test materials, and testing instructions will begin within five minutes of the posted start time of the exam. The total testing time is four hours. Additional time has been allotted for instructions. You can expect to leave the testing center at approximately 4.5 hours after the posted start time for the exam. There are no scheduled breaks.

## TESTING SITE RULES

The following are rules enforced at all test administrations. Candidates found not to follow these standards will immediately be removed from the exam and their test papers collected. The incident will be reported to the CEM Certification Director.

- All candidates must have proper photo ID to be admitted to the test.
- Candidates are admitted only to their assigned test site at their assigned time.
- Live Testing: Candidates arriving more than 30 minutes after the posted test time will not be allowed to take the exam. Extended time will not be provided to those who begin the exam after the posted start time. Those taking the exam at a live testing site will have to reschedule.  
Remote Testing: Candidates will log in to their ProctorU account 3-5 minutes before the scheduled exam start time to go through the exam system checklist with the proctor.
- No guests are permitted in the examination room.
- The exam is open book and calculators are REQUIRED.
- Use of laptops, cell phones, recording devices, PDAs, or other wireless capable devices is not permitted during the exam.
- No unauthorized material is allowed in the exam room.
- No device capable of taking images is allowed in the exam room.
- Live Testing: Talking, comparing answers, or exchanging reference materials during the exam is not permitted.  
Remote Testing: No talking or reading aloud is permitted during the exam.
- You will only be allowed to make exam notes/calculations on the whiteboard or scratch paper. You may not add or remove any paper to and from your binder during the test.
- While testing, it is the candidate's responsibility to always keep their testing materials in their own space (and out of sight of other examinees for live testing) and in view of the proctor(s). An examinee that is found in violation of the testing rules will be automatically disqualified, dismissed, and reported. A retake of the exam will not be permitted for six months.
- Absolute silence must be maintained in the exam room.
- Upon request, candidates will be excused for bathroom breaks. Live Testing: only one person at a time may leave the room during the exam. The exam booklet must be left in the testing room in the closed position, with the answer sheet turned over so that the answers are not visible.  
Remote Testing: upon return, candidate must complete secure room check with proctor before resuming exam.
- Live Testing: The exam booklet, answer sheets, and scratch paper may not be taken from the exam room and must be turned in to the proctor immediately upon completion of the exam.  
Remote Testing: Candidates must erase whiteboard in view of proctor and destroy scratch paper in view of proctor before exiting the exam.
- If taking the exam at a live testing site, use a number 2 pencil when filling in your answer sheet. If you erase an answer, please do so completely. If taking a remote exam, all answers will be recorded electronically in the exam software.

- Scoring is based on the number of correct answers. Because there is no penalty for wrong answers, it is to your advantage to answer every question in each section. If a question is difficult, you may decide to come back to the question after you have completed all the questions with which you are familiar.
- The exam will be 4.0 hours.

## EXAMINATION IRREGULARITIES

Any problems, suspected incidences of cheating, alleged inappropriate examination administration, environmental testing conditions severe enough to cause disruption of the process, or other irregularities related to test administration should be addressed to the onsite proctor or to the CEM Director. All such matters will be reported, investigated, and subject to further action based upon policies and procedures adopted by AEE.

## HANDLING OF TESTS

AEE will take all available precautions to ensure the appropriate and secure handling of completed tests. In the rare and extreme case in which the tests become lost or unreadable, candidates will be required to undergo retesting, without being charged a re-examination fee. Candidates will be responsible for their own travel-associated expenses for future testing.

## NOTIFICATION OF RESULTS

Candidates are notified via email of their examination results within 30 days of the test administration. Candidates who successfully complete the examination and whose credentials and application entitle them to certification will be notified by letter and be granted an AEE Certified Energy Manager certification. Candidates who did not successfully complete the examination will be notified via email and given a diagnostic report on the reason for their failing.

## RETESTING

If a candidate fails his or her first attempt to pass the CEM exam, AEE requires a waiting period of at least 60 days between the first and second attempt to pass that same exam. Additionally, before any candidate's third attempt or any subsequent attempt to pass the exam, the candidate is required to wait for a period of at least 60 days from his or her last attempt to pass the exam. Candidates must submit a retesting form, which is provided at <http://www.aeecenter.org/cemresources>. If the candidate passes the CEM exam, the candidate is prohibited from retaking the same certification exam.

## MAINTAINING CERTIFICATION

The continuing education of Energy Managers is essential to cope with the rapidly changing field of energy management. A CEM must accumulate ten professional credits every three years and submit a completed Renewal Form to the Certification Renewal Director to remain certified. CEM renewal notices are mailed in the 3<sup>rd</sup> year of certification six months prior to the expiration date, which falls on December 31 of that year.

Professional credits for recertification can be accumulated at any time within the three-year period. For example, Energy Managers receiving a CEM certification in 2023 must file a record of ten professional credits with the Certification Renewal Director by December 31, 2026 to receive a CEM certificate for another 3-year period. ***Credits are not maintained by AEE during the three-year period. It is the responsibility of the individual to maintain a record of credits accrued and submit this information at the time of renewal.***

### Activities for CEM Renewal Credits



- Continued employment in energy management/energy engineering activities: **1 credit per year.**
- Membership in a professional engineering society: **1 credit per year (3 max).**
- Continuing education (CEU's) / professional activities (seminars or conferences): **2 credits** per CEU, college credit hour or 10 contract hours for seminar.
- Awards presented and/or papers published involving energy engineering/management: **2 credits each.**
- Offices held in a professional engineering society: **2 credit per year.**

## RETIRED CERTIFICATION STATUS

A CEM, upon retiring and reaching the age of sixty-five, will be designated as “CEM – Retired,” will no longer be required to pay renewal fees, and will no longer be listed in our directory of actively practicing CEMs. No further reporting is necessary except to notify the Certification Renewal Director of meeting the age requirement by sending a copy of the retired CEM’s Driver’s License.

If a retired CEM would like to reverse the certification status from retired to active, the retired CEM would need to follow one of the two options to reinstate the certification under reinstatement of CEM section.

## REINSTATEMENT OF CEM

Certified Professionals who do not acquire sufficient CEM maintenance points to be recertified on the recertification date will be dropped from active certifications and notified in writing of suspension from using the CEM designation. They will also no longer be listed as a CEM in any AEE publication. A lapsed CEM has the following options to reinstate:

- Resubmit to the certification process and successfully meet the criteria for certification by personal data information and examination or,
- Acquire make-up points at a cumulative total equal to 3.5 per year for every year since date of expiration. This option is available one-time only. Certifications that have lapsed more than three renewal cycles must retake the CEM exam.

## REQUEST FOR DUPLICATE CERTIFICATE

Any certified professional may request additional copies of his or her certification document. Requests must be made in writing to AEE and may be made at any time. The fee of \$20 must be included with the request. The request for a duplicate certificate form can be found at <http://www.aeecenter.org/cemresources>.

## USE OF CEM DESIGNATION

The certificate mark and logo are the property of AEE. Permission to use the certification mark or logo is granted to certified persons at the discretion of the AEE’s CEM Board, for permissible uses only. As a Certified Energy Manager (CEM®), the Energy Manager may use the designation with his/her name on organization letterheads, business cards, certain internet listings and forms of address. The Energy Manager may be required to surrender the certificate if it is revoked or suspended. An official CEM® Stamp which authenticates your Certification and Certification validation is available for purchase. The official stamp is useful for proposals and official documents (see below).

Certification is for individuals only. The CEM designation may not be used to imply that an organization, company, or firm is certified. AEE does not endorse or recommend any individual CEM, product or service. Improper usage of CEM or AEE logo may result in suspension. If you have questions about usage of the CEM designation, please contact AEE.

### **Sample Correct Usage** (Signature or Business Card):

John A. Smith, P.E., C.E.M. / Mary Jones, B.E.P., C.E.M.

**Web Usage:**

John A. Smith is an individual member of the Association of Energy Engineers ([AEE](#)) and is a [Certified Energy Manager](#) (CEM®).

**Incorrect Usage:**

ABC Company is Certified by AEE.

**Correct Usage:**

- ABC Company has many Certified Energy Managers -CEMs® on its staff.
- ABC Company is looking for a Certified Energy Manager candidate for a position.
- John Smith, President of ABC Company, is an individual member of the Association of Energy Engineers and is a Certified Energy Manager (CEM), Certified Carbon Reduction Professional (CRM) and Certified Sustainable Development Professional (CSDP).
- ABC Company is a Corporate Member of the Association of Energy Engineers (AEE) and has five current Certified Energy Managers (CEM) on staff including.....

John Smith is an individual:

Corporate Member of:



Link to [www.aeecenter.org/certification](http://www.aeecenter.org/certification)



Link to [www.aeecenter.org](http://www.aeecenter.org)

**CEM STAMP**

As the CEM designation becomes a requirement for more jobs and projects, an official stamp is available that authenticates your status as a CEM in good standing. The stamp will include your name, your CEM ID number, and the expiration date of your CEM. Stamp is self-inking with dark blue ink. Submit the online form at <http://www.aeecenter.org/cemresources>. Price: \$50 for US applicants (includes shipping)/Electronic Version: \$15 (only available as an add-on to \$50 stamp)



**PROGRAM DISPUTES AND SUBMISSION OF PROGRAM COMPLAINTS**

Individuals with disputes regarding the assessments, personnel, certificants or other elements of the certification program are encouraged to discuss these with the individuals involved to try to resolve the matter informally. In some cases, however, informal resolution is not possible, and individuals may wish to file a formal complaint. A complaint shall be submitted in writing using the *Complaint Submission Form*, available from the Certification Director upon request, and submitting it to the Certification Director within 90 days of the incident’s occurrence. The submission may be mailed, emailed, or faxed. The submission shall include sufficient objective evidence to substantiate the claims and allow for a decision to be made and the appropriate action to be taken. Dissatisfaction based on hearsay shall not be considered as a complaint. AEE will communicate the resolution to an individual within a period of no longer than 30 days. The complainants identity and subject of complaint will remain confidential.