



AEE International Programs: Certified Energy Manager® Application

CEM®

Note: As of July 1, 2009, all applicants must take a required approved preparatory seminar before sitting for the exam**. This document to be used along with IISWBMCEMMumbaiBrochure2017
<https://www.aeecenter.org/certifications/certifications/certified-energy-manager>

The following information is contained in this booklet:

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Part A: Information for Applicants

CERTIFIED ENERGYMANAGER® (CEM®)

Please read through the following important information before submitting your **CEM® Application found in part B** of this booklet.

1. CEM® 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.

2. ELIGIBILITY

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

- 2.1 A four-year degree in engineering or architecture or be a registered professional engineer (P.E.), or registered architect (R.A.). In addition, the applicant must have at least 3+ years experience in energy engineering or energy management
OR
- 2.2 A four-year degree in technology, environmental science, physics, or earth science and have at least 3+ years experience in energy engineering or energy management
OR
- 2.3 A three-year degree in business and at least 6+ years experience in energy engineering/management
OR
- 2.4 A three-year degree holder with post-graduate degree in Management or equivalent with 5+ years of work experience involving use of energy in operation, maintenance, planning, etc.
OR
- 2.5 A post-graduate Engineer (Master of Engineering/Master of Technology) or equivalent with 2+ years of work experience involving use of energy in operation, maintenance, planning, etc.
OR
- 2.6 A graduate Engineer with post-graduate degree in Management or equivalent with 2+ years of work experience involving use of energy in operation, maintenance, planning, etc.
- 2.7 A diploma Engineer or equivalent with 6+ years of work experience involving use of energy in operation, maintenance, planning, etc.;
- 2.8 a post-graduate in Physics or Electronics or Chemistry (with Physics and Mathematics at graduation level) with 5+ years of work experience involving use of energy in operation, maintenance, planning, etc.



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**** CEM Training would not be mandatory for the following candidates:**

Candidate possessing CEM or CEA certification from Bureau of Energy Efficiency (BEE), Government of India

Candidate completed, within three years from the date of examinations they take, MBA-PS degree OR Master in Public Systems Management (MPSM) with specialization in Energy Management from University of Calcutta

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

If those who are eligible, in terms of educational qualification, to take the exam (but do not meet the experience requirement, on the date of application for CEM examination, as mentioned on the right-side column of this paper) receive a passing score and they can still earn the Energy Manager In Training (EMIT) certification. Then they have up to six years to gain the number of years of experience needed based on their education level (see the eligibility requirements for the CEM and EMIT) as also given in the following links:

CEM and EMIT: <https://portal.aeecenter.org/i4a/pages/index.cfm?pageid=3351>

3. THE REQUIRED BODY OF KNOWLEDGE

The effective practice of energy management requires 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.

4. PROCEDURES

The first step in the CEM certification process is to register for a required approved preparatory seminar. After seminar registration has been completed, the certification application should be completed. Since certification is based on education, experience and passing the examination, it is important that the applicant understands the eligibility requirements (section 2 above), and has attained the prerequisite to qualify for certification.

It is very important that all applicants give clear and complete details concerning energy management experience so that the CEM Board can have a clear understanding of the applicant's energy management experience.

5. THE APPLICATION

The Application Form provides an organized method for documenting professional and educational background, achievements, and community service.

The Personal Data Form is divided into the following three parts:

Division I – Education

Division II – Professional Registration (i.e. Professional Engineer, Registered Architect)

Division III – Experience/Employment in Energy Management



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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.

The two areas of evaluation shall receive points as follows:

Application Form Data	Completed Application is required
CEM Examination	Maximum Score 1040 points Minimum Score Required 700

To be awarded the CEM designation, candidates must submit a completed application form and meet eligibility requirements and a minimum score of 700 points on the CEM examination.

If a candidate has failed to meet the requirements to be recommended for CEM, the candidate may be re-examined at a subsequent examination period and/or resubmit an updated Application Form. Examination scores will be kept on file by the Certification Director for a period of three years. Applicants have three years to follow up and complete his/her CEM file; after three years, applicants must resubmit the application and retake the CEM exam.

It is essential that candidates devote considerable time and effort to completing the Application Form since certification by the CEM Board can be based only on the information provided. Inaccurate and/or incomplete data will only be a liability for the applicant.

6. THE CEM EXAMINATION

The applicant must complete a four-hour exam. The examination questions are based on concepts and experiences basic to energy management, on recognized tests, and on supplemental reading. **The exam is Open Book!** Because of the diversity of background and experience of Energy Managers, the examination will permit the candidates some choice of subject areas. Two subject areas will be mandatory. Of the remaining 13 examination sections, the candidate will choose nine sections he/she feels best qualified to answer. The exam consists of multiple choice and true/false questions. Candidates are notified of exam results by mail or email.

The CEM Examination contains with the following mandatory subjects:

All candidates must answer Sections 1 and 2.

- | | |
|---------------------------------------|------------|
| 1. *Energy Accounting and Economics | 160 points |
| 2. *Energy Audits and Instrumentation | 160 points |

The candidate will choose 9 of the remaining 13 sections. If more than 9 additional sections are marked, only the first 9 will be scored. Eleven Sections Total: twomandatory andnine chosen by candidate.

- | | |
|--|-----------|
| 1. Electrical Systems | 80 points |
| 2. Heating, Ventilating and Air Conditioning Systems | 80 points |



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3. Motors and Drive Systems	80 points
4. Industrial Systems	80 points
5. Building Envelope	80 points
6. Combined Heat & Power Systems and Renewable Energy Systems	80 points
7. Building Automation Systems	80 points
8. Control Systems	80 points
9. Thermal Energy Storage Systems	80 points
10. Lighting Systems	80 points
11. Boiler and Steam Systems	80 points
12. Maintenance and Commissioning	80 points
13. Financing, Performance Contracts, Measurement and Verification	80 points

7. 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 Director to remain certified. CEM renewal notices are mailed in the 3rd year of recertification 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 2009, must file a record of ten professional points by December 31, 2012 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 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:



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1 credit per year

8. RETIRED CERTIFICATION STATUS

A CEM, upon retiring and reaching the age of sixty-five, will be designated as a “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 Director of meeting the age requirement by sending a copy of the retired CEM’s Driver’s License.

9. REINSTATEMENT OF CEM

Certified Professionals who do not acquire sufficient CEM maintenance points to be recertified on 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:

1. Resubmit to the certification process and successfully meets the criteria for certification by personal data information and examination or,
2. 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.

10. 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 in the event that 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 next page).

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. A Personalized CEM Stamp also available. CEM[®] Stamp (see Stamp Order Form).

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).

C.2.CEM.2 – Certified Energy Manager Application – 10/2017



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- 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:

CEM[®]

Link to www.aeecenter.org/certification  The Association of Energy Engineers www.aeecenter.org Link to www.aeecenter.org

11.CEM STAMP

A Set of Hard Copy of CEM Workbook will be provided to all registered participants at the time of class

References the Guide to Energy Management Handbook, International Version, <https://www.aeecenter.org/certifications/resources/cem-resources>

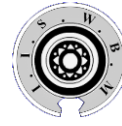


As the CEM designation becomes a requirement for more jobs and projects, AEE is pleased to announce the availability of an official stamp that will authenticate your status as a CEM in good standing. The stamp will include your name, your CEM ID number, and the expiration date of your CEM. Stamp is self-inking with dark blue ink. Please use the order form provided in this application. Price: \$50 (includes shipping).

12. STUDY MATERIALS

Online one can get the Study Guide here. References to the Guide to Energy Management Handbook, International Version, Free webinars are also available for some prep work: <https://www.aeecenter.org/certifications/resources/cem-resources>

A Set of Hard Copy of CEM Workbook will be provided only to the participants registered to CEM Training course and at the time of training session



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Stamp includes name, CEM ID number, and the expiration date of your certification.

Stamp image size: 2"

Price: \$50.00 includes shipping

**Price: \$15.00 for electronic version
(electronic version is not available separately, only as add-on to stamp order)**



Please allow 4 to 6 weeks for delivery.

CEM STAMP ORDER

Name:	Company:
Street Address:	City/State/Zip:
E-Mail Address:	Phone No:

DESCRIPTION				QUANTITY	UNIT PRICE FOR STAMP	QUANTITY	UNIT PRICE FOR ELECTRONIC VERSION*	TOTAL
NAME	AEE MEMBER ID #	CEM CERTIFICATION ID #	DATE OF CEM EXPIRATION					
					\$50.00		\$15.00	
TOTAL DUE								

** Electronic version is available only as add-on to order for CEM stamp.*

Check method of payment:

Check: Make check payable to Association of Energy Engineers

Credit Card:

American Express

VISA

MasterCard

Card No. ↑

Expiration Date:

Signature:

Mail to: Official CEM Stamp
Association of Energy Engineers
4025 Pleasantdale Road, Suite 420
Atlanta, GA 30340

or Fax to: 770-446-3969

or E-Mail to: priscila@aeecenter.org



Part B: CEM[®] APPLICATION

CEM Exam with Live International Training/Seminar Version

1) Seminar Name / Date / Location (REQUIRED): _____

NOTE: The following information is to be filled out as completely as possible. Please read the "Information for Applicants" very carefully, and also follow instructions for completing and forwarding forms. It is important that the AEE Certification Board have substantiating data for each criteria indicated in the application. Chose any one of the following three payment options:

- i) A/c Payee Bank Draft in favour of "Indian Institute of Social Welfare & Business Management" at the time of admission. The draft should be drawn on State Bank of India, Service Br., Kolkata and should reach the Institute by 20th September, 2017 between 10.30 a.m. to 03.00 p.m. (except Saturday & Sunday) OR
- ii) Bank details for NEFT/RTGS Transfer: Beneficiary: IISWBM, Name of Bank: State Bank of India, Surya Sen Street Branch, Kolkata, ACCOUNT NO.:10252384198, IFS Code: SBIN 0003496.

Mail/Deliver (or after Email by 20th September 2017 to bkchoudhury@iiswbm.edu, Handover at Site in Mumbai on 3rd October 2017 the Hard Copy of) the application to : CEM Administrator

K.A. Dr. B K Choudhury, Professor and CEM Trainer, ENERGY MANAGEMENT DEPARTMENT, INDIAN INSTITUTE OF SOCIAL WELFARE & BUSINESS MANAGEMENT (IISWBM), MANAGEMENT HOUSE, COLLEGE SQUARE WEST, KOLKATA, INDIA, PIN-700073; www.iiswbm.edu; Phone: 9433153009; 40237474 Ext. 607

APPLICANT INFORMATION

(Please print or type) Full legal name as it will appear on certificate:

Gender: _____ Prefix: _____ Position Title In Company: _____

Family Name: _____ Given Name: _____ Middle Name (if any): _____

Company Name: _____

Company Street Address: _____

City: _____ State/Province: _____ Postal Code: _____ Country: _____

Phone: _____ Fax: _____ Business E-mail: _____

Residence Street Address: _____

City: _____ State/Province: _____ Postal Code: _____ Country: _____

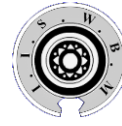
Phone: _____ Fax: _____ Personal E-mail: _____

Preferred Communication: Business Residence

FEES

Course Option (A or B) : _____ Method of Payment: _____ Fee Amount: _____

Card Number/Check Number/Bank generated receipt with UTR number: _____



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DIVISION I – EDUCATION

List in chronological order the name and location of each college or university from which you have earned a degree; also list other appropriate training.

Name & Location Of Institution	Years From - To	Date Graduated	Degree Received	Field In Which Degree Was Issued

DIVISION II – PROFESSIONAL REGISTRATION

- I am a Professional Engineer: yes no
- I am a Registered Architect: yes no
- I am a Chartered Engineer: yes no
- I am a Certified Plant/Boiler Engineer: yes no
- I am an Energy Auditor: yes no
- I am a CEM/CEA/AEA of BEE, India: yes no

If yes to any of the above, complete the following and **enclose copy of registration. Registration must indicate that license is currently in force.**

Country	Registration No.	Date	Now in Force
			<input type="checkbox"/> yes <input type="checkbox"/> no
			<input type="checkbox"/> yes <input type="checkbox"/> no
			<input type="checkbox"/> yes <input type="checkbox"/> no
			<input type="checkbox"/> yes <input type="checkbox"/> no
			<input type="checkbox"/> yes <input type="checkbox"/> no

Have any registrations been revoked or suspended? yes no

If yes, please explain:



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DIVISION III – EXPERIENCE RECORD

Please complete the following in chronological order and list the most recent employer first. Include a description of job functions held for those periods of employment, which qualify you for specific category of certification as applied for. This form may be copied if additional space is needed.

Date: From-To(mm/yy – mm/yy)	Employer Name & Address	CONCISE STATEMENT OF ENERGY-RELATED WORK PERFORMED
TITLE OF POSITION		
Date: From-To(mm/yy – mm/yy)	Employer Name & Address	CONCISE STATEMENT OF ENERGY-RELATED WORK PERFORMED
TITLE OF POSITION		
Date: From-To(mm/yy – mm/yy)	Employer Name & Address	CONCISE STATEMENT OF ENERGY-RELATED WORK PERFORMED
TITLE OF POSITION		
Date: From-To(mm/yy – mm/yy)	Employer Name & Address	CONCISE STATEMENT OF ENERGY-RELATED WORK PERFORMED
TITLE OF POSITION		



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REFERENCES

Furnish the names and addresses of two references. References should be CEM professionals, PEs, RAs, AEA or other highly distinguished professional in the industry.

Name	Company and Address	Position

OBLIGATION

I _____ (Signature), having completed the aforementioned to the best of my ability, do hereby apply for AEE Energy Manager Certification and wish to take the CEM Examination.

AFFIDAVIT

I hereby agree (a) to be bound by terms and provisions of the Certificate of Incorporation of the Association of Energy Engineers, its by-laws and such other regulation as may from time to time be in force, so far as they may affect me; (b) to indemnify and hold harmless each and all of your members, Board of Directors, Certification Board, officers, examiners and agents from and against any liability whatsoever in respect to any act or omission by you or them or any of them in connection with this application, the examination, the grades given upon such examination, and/or the granting or issuance of o failure to grant o issue a certificate to me; (c) that any prescribed fee paid by me is not refundable; and (d) that any certificate granted or issued me shall remain the property of the Association. I certify that all the information contained in this application is correct to the best of my knowledge.

I further pledge myself hereby to the highest ethical standards in the practice of energy engineering/management.

Signature in Full _____

Date: _____



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**REQUEST FOR EMPLOYMENT AND
JOB DUTIES VERIFICATION**
Certified Energy Manager

From: _____

To: _____ Date: _____

Dear _____:

I am applying to the Association of Energy Engineers for Certification as an Energy Manager. In this regard, I hereby authorize your release of the requested information enclosed which verifies my employment and duties from the period _____ to _____.

Please furnish the requested information as completely as possible, and **return to THE ORGANIZERS.**

The receipt of replies will be reported by AEE, but under no circumstances will the information be divulged to me, or used for any purpose except to validate my application for Energy Manager Certification.

Applicant Signature



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NOTE: If self-employed, complete letter of client verification.

APPLICANT COMPLETE / Attach to Cover Letter

Name:

Address:

City: State/Province: Country: Postal Code:

LETTER OF EMPLOYMENT and JOB DUTIES VERIFICATION

The following information verifies the employment and duties of the above applicant for AEE Certification.

Company: Telephone:

Address:

City: State/Province: Country: Postal Code:

The above named applicant was (has been) employed by our company from _____ to _____ and has held the following positions:

Dates: _____
Dates: _____
Dates: _____
Dates: _____

Please fully describe the energy-related responsibilities of the applicant (REQUIRED). Attach descriptions if necessary to answer fully. Forms with incomplete details will not be processed.

To the best of my knowledge, and our employment records, I hereby attest that the above information is true and correct.

Name of person supply information: _____
(please type or print)

Official Title of Respondent: _____

Signature: _____ Date: _____

Return to: CEM Administrator

ENERGY MANAGEMENT DEPARTMENT, INDIAN INSTITUTE OF SOCIAL WELFARE & BUSINESS MANAGEMENT (IISWBM),
MANAGEMENT HOUSE, COLLEGE SQUARE WEST, KOLKATA, INDIA, PIN- 700073;
www.iiswbm.edu; Phone: 9433153009; 40237474



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REQUEST FOR CLIENT VERIFICATION Certified Energy Manager

From: _____

To: _____ Date: _____

Dear _____:

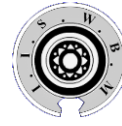
I am applying to the Association of Energy Engineers for Certification as an Energy Manager. In this regard, I hereby authorize your release of the requested information enclosed which verifies my employment and duties from the period _____ to _____.

Please furnish the requested information as completely as possible, and ***return to THE ORGANIZERS.***

The receipt of replies will be reported by AEE, but under no circumstances will the information be divulged to me, or used for any purpose except to validate my application for Energy Manager Certification.

Applicant Signature

NOTE: Complete this form only if self-employed – furnish three (3) client verification letters.



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NOTE: If Self-Employed, furnish three (3) client verifications.

APPLICANT COMPLETE / Attach to Cover Letter

Name: _____

Address: _____

City: _____

State/Province: _____

Country: _____

Postal Code: _____

CLIENT COMPLETE / LETTER OF CLIENT VERIFICATION

The following information verifies the Contractor/Consultant and duties of the above applicant for AEE Certification.

Company: _____

Telephone: _____

Address: _____

City: _____

State/Province: _____

Country: _____

Postal Code: _____

The above contractor/consultant has provided service(s) to our company from:

_____ to _____

Please fully describe the energy-related responsibilities of the applicant (REQUIRED). Attach descriptions if necessary to answer fully. Forms with incomplete details will not be processed.

To the best of my knowledge, I hereby attest that the above information is true and correct.

Name of person supply information: _____
(please type or print)

Official Title of Respondent: _____

Signature: _____ Date: _____

Return to: Prof Dr B K Choudhury (Email: bkchoudhury@iiswbm.edu)
ENERGY MANAGEMENT DEPARTMENT, INDIAN INSTITUTE OF SOCIAL WELFARE & BUSINESS MANAGEMENT (IISWBM),
MANAGEMENT HOUSE, COLLEGE SQUARE WEST, KOLKATA, INDIA, PIN- 700073;
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