



The Association of
Energy Engineers
Hong Kong Chapter



香港能源工程師學會
Hong Kong Association of Energy Engineers

CAP

Certified Carbon Auditor Professional (CAP)

FAST TRACK PROGRAM for MHKIE & RPE

In accordance with the requirements of
The Environment and Conservation Fund for the
Register on Engineers for certifying Energy-cum-carbon Audit Projects

2.5-Day Program for Professional Certification

Course Date: 21-22 Sept, 2009,
Exam: 26 Sept, 2009

Time: 9:00 am to 5:30 pm
Time: 1:30 pm to 5:30 pm

Venue: Cliftons, 6/F Lincoln House, Taikoo Place, 979 King's Road,
Quarry Bay, Hong Kong

Course Code: CAP / 05F / HK

Registration Deadline: 14 Sept 2009

THE MARK OF A CARBON AUDIT PROFESSIONAL

Climate change has become a challenge to the international community. The Association of Energy Engineers (USA) has been offering an international professional training course on carbon audit and reduction in 2008. The course was introduced to Hong Kong in 2008. It is believed that the Certified Carbon Audit Professional (CAP) training course will become widely accepted and used as a measure of professional accomplishment within the energy management field. It will gain industry-wide use as the standard for qualifying energy and carbon audit professionals both in the United States and worldwide. **The course is a custom-tailored course for Hong Kong for the "Guideline to Account and Report Greenhouse Gas Emissions and Removals for Buildings of Commercial, Residential or Institutional Purposes in Hong Kong".**

COMPREHENSIVE 2.5-DAY TRAINING PROGRAM FOR CARBON AUDITOR

This is the first Fast Track CAP course in Hong Kong for the Hong Kong practice. **The required entry requirement shall be a member of the Hong Kong Institution of Engineers or a Registered Professional Engineer (RPE) in the discipline of Building Services, Mechanical, Electrical, or Environmental.** The US instructors shall travel from the headquarters to Hong Kong to conduct the training. CAP certificates will be issued directly from the Association of Energy Engineers (USA Headquarters) to candidates after passing the exam with eligibility conditions of experience and qualifications.

Regular Price: HK\$8,000.00
Discounted Price*: HK\$7,600.00

* For members of AEE HK Chapter, HKAEE and all supporting organizations.

For the candidate not an RPE or MHKIE of the relevant discipline can join the normal course (4-Day) to become certified, if he/she meets our certification eligibility.

**Supporting
Organizations:**



ASHRAE
HK Chapter



BSOMES



(Hong Kong Branch)
能源學會(香港分會)



BUSINESS
ENVIRONMENT
COUNCIL
商界環保協會



engineering success
soe hong kong region
香港工程師學會 香港分會

ABOUT THE COURSE

This fast-paced course will prepare seasoned energy professionals to be familiarized with the proven techniques of identifying and implementing a carbon reduction program aligned with the Kyoto Protocol and the guidelines published by WRI, ISO and WBCSD and the HK Government. Attendees passing the CAP examination at the end of the course would become certified in this new area of expertise. If you are new to the language of carbon reduction or energy management, we recommend you take this fast track CAP Course from HKAEE, in which more time is allotted to each of the topics in the agenda.

A candidate successfully completed the CAP training course, (including passing the examination) together with other professional qualification requirements, may be registered as an energy-cum-carbon auditor under the "Energy and Carbon Audit Projects" scheme launched by the Environment Bureau for undertaking related energy-cum-carbon audit projects.

For details of the scheme, please visit the government site as follows:-

<http://www.building-energy-funds.gov.hk/>

Professional knowledge on::

- How to set up a carbon reduction program using cutting-edge resources and tools.
- How to calculate and communicate the "Green" benefits from your energy-efficiency projects.
- How you can improve the financial bottom line, the environment, your clients and colleagues in your business.

Additional Benefits:

- Prepare for new legislation that could affect your organization.
- Increased business efficiencies and profits,
- Energy, water, waste, taxes (and other resource) savings,
- Improved company image and marketing opportunities.

INSTRUCTOR

Dr ERIC WOODROOF, Ph.D., CEM Board Member, CRM Board Chairman, is a trainer and writer, widely recognized both nationally and internationally for helping energy/environmental projects get approved and implemented. His focus is to help clients make more money and simultaneously help the environment. Dr. Woodroof has over 15 years of experience, 20 publications and has identified profit-improvement strategies at over 200 facilities. He has also been a Board Member of the Certified Energy Manager Program since 1999. Dr. Woodroof has worked with the U.S. Public Health Service, Ford, GM, Hertz, Visteon, Trane, Johnson Controls, IBM, the Tulsa International Airport and many others. He is friends with many of the top minds in energy, environment, finance and marketing.



EDUCATION:

- 1998 Ph.D. Industrial Engineering (Energy & Environment Emphasis)
- 1995 M.S. Environmental Sciences (GPA = 4.0)
- 1992 B.S. Physics

Supporting Organizations:



COURSE OUTLINE

DAY 1:

INTRODUCTION, EXECUTIVE BRIEFING & HIGH-LEVEL STRATEGIES

- Introduction and The Need for Carbon Reduction:
 - Trends and Data on the Global Challenges we Face, (Data Students Can Apply)
 - Why Monitor and Reduce Your Organization's Carbon Footprint?
 - History, Legislation and Terminology
 - Examples of Successful Programs: Profits, Results and Benefits,

INTRODUCTION TO THE CARBON REDUCTION PROCESS

- Insights from Class / Instructor
- Carbon Reduction Process Overview:
- Protocol Overview & Terminology
 - Kyoto's 6 Listed Greenhouse Gases, GWP Factor, Control vs. Equity Share Approaches, Base Year and Adjustments, Transitional Periods, Tier Quantification System. ISO 14064 & 14065 as well as Trading Terms like: CCX, CDM, JI, VER, etc.
 - Emissions Types: Direct, Indirect, Fugitive and Mobile; Scope I, II and III and Biogenic
- Overview: Carbon Audit and Reporting Process (Getting Credit for What you Do):
 - Identify Boundaries (Tenant vs. Communal Areas), Sources
 - Quantify, Report and Verify Emissions
 - Hong Kong Guidelines

CARBON FOOTPRINT MEASUREMENT & MONITORING

- Components of a Carbon Audit
- GHG Conversion Worksheets, Emissions Conversion Exercises- *to help students convert energy savings into avoided carbon emissions*
- Carbon Reduction Reporting Software
 - Protocols and timelines to calculate, certify and report your emissions
 - Establishing reduction goals as well as monitoring and reporting tools
 - Verification process tools

Supporting Organizations:



- Direct, indirect, mobile and fugitive source management
- Verification Process and Preparation
- Practical Tips for Setting up a Program in Your Facility
- Implementation and Data Management Best Practices
 - SF Gov Example Document
- BIG Exercise (Evening)

DAY 2:

PRACTICAL STRATEGIES & TACTICS TO REDUCE YOUR CARBON FOOTPRINT AND ENVIRONMENTAL IMPACT

- Quick review, Insights from Case Studies
- Proven tactical measures to reduce your carbon footprint:
 - Re-Engineer Processes to Reduce Carbon
 - Resources for Building it “Right”, (LEED plus more)
 - Energy Efficiency and Management
 - Energy Procurement and Green Power
 - Renewable and other Sustainable Technologies
 - Tax Benefits
 - Green Janitorial, Water & Waste Management / Reuse / Recycling
 - Green Transportation and Administrative Functions
 - Greening your Suppliers and Distributors
- Local Strategies and Techniques
- Q&A

Supporting Organizations:



CARBON CREDITS, OFFSETS, TRADING AND MARKETING

- Carbon Trading and Credit terminologies
 - Renewable Energy Certificates
 - Green & White Certificates, Offsets Explained
 1. Wind, Solar, Methane Recovery... Certified Credits
 2. Fleet management
 - Additional profit-generating as well as bartering strategies
- Creating an On-Going Green Program:
 - Justification for a “Green” Manager
- 3 Big Reasons why Green Projects Fail... and How to Overcome Them
- HOMEWORK REVIEW
- Financing and Marketing Tactics to help your “Green” project get approved.
- Final Self-Assessment
- WRAP UP / Conclusion

Supporting Organizations:



Examination

EXAM DAY

100 Questions: (The Table Below Indicates # Questions per Topic)

TOPIC	NUMBER OF QUESTIONS
Understanding The Problem:	
History, Terminology, Policy and Legislation	15
Carbon Audit	20
Emissions Reporting / Verification	15
Emissions Conversions	10
Solutions:	
Energy Efficiency Solutions	5
Renewable Energy Sources and Green Power	5
Fleet Management	5
Emissions Trading, Terminology and Offsets	10
Recycling, Water-Management, Financing and Marketing	15
TOTAL	100

Note: Regarding the test categories, "Emissions Reporting/Verifications and Conversions" are key components to conducting a compliant carbon audit, so the "carbon audit" related categories actually comprise about 45% of the exam.

Supporting Organizations:



Eligibility

The prerequisites to qualify for the certification process have been designed to take into account the possible diversity of education and practical experience an individual may have. However each CAP candidate must meet one of the following criteria with the pass of exam:

- A **Certified Energy Manager (CEM)**,
with CPD in energy engineering or energy management.
- An **engineering degree and/or R.P.E and/or P.E.**,
with at least **three** years experience in energy engineering or energy management.
- A **business or related degree**,
with at least **five** years experience in energy engineering or energy management.
- A **technical diploma or certificate**,
with **eight** years experience in energy engineering or energy management.
- **Ten** years or more **verified experience** in energy engineering or energy management.

(Note: Letters of reference and verification of employment must be submitted.)

Application forms will be distributed the students after the course/exam for the certification.

Conditions

1. **All candidates should firstly fax/email the form for registration and issue cheque for seat confirmation.**
2. **Every effort will keep the course date unchanged. However, all candidates will be informed well in advance should there be any change of course date due to venue booking and other reasons.**
3. **The course contents may be subject to change according to the decision of the instructors.**
4. **The organizer reserves the right to cancel the course should there be insufficient candidates or other reasons. Course fee will then be refunded 100%.**
5. **The organizer reserves the right to close the application before the deadline should the application exceeds the maximum intake.**
6. **All CAP successful candidates will enjoy a 1-year free AEE membership and a CAP certificate if he/she fulfils the eligibility requirement.**

Supporting Organizations:





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< REPLY SLIP >

The Certified Carbon Audit Professional (CAP) Fast Track Program (MHKIE & RPE) for Professional Certification

Course Code: CAP / 05F / HK

Registration

Deadline: 14 September 2009

(Registration would be on first come first serve basis. Application to the course will be closed before the deadline when the maximum class size, dictated by the venue space, is reached).

To register, please complete and return the reply slip by fax to (852) 2372 0490 or email to adela@creativegp.com and then mail to the below address to secure seat with your crossed cheque payable to:

“AEE Hong Kong Chapter”

c/o Creative Consulting Group Inc.

Room 1106-8, 11/F, C C Wu Building, 302-8 Hennessy Road, Wanchai, Hong Kong.

Attention: Ms Adela Au-Yeung (Tel: 2372 0090)

Course Enquiry

Dr Leonard Chow, AEE Authorized Course Certification Administrator in Hong Kong.

Tel: 2566 3397, leonardchow@ispl.com.hk

Course & Exam Fee: HK\$8,000 / HK\$7,600 (Delete as appropriate)

Date of Registration: _____

Name (Same as HKID Card): _____ (Ir/Mr/Ms/Miss)

Company Name: _____

Position Title: _____

Company Address: _____

Contact Phone: (Office) _____ (Mobile) _____

Fax #: _____ Email Address: _____

Institution: _____ Membership No: _____

Cheque no.: _____ Amount (HK\$): _____

Supporting
Organizations:



ASHRAE
HK Chapter



CIBSE



BSOMES



(Hong Kong Branch)
能源學會(香港分會)



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