

# CERTIFIED CARBON AUDITOR TRAINING COURSE

15 - 18 July 2009

## Organiser



## Supporting Organisations



## Background

The emissions of carbon dioxide (CO<sub>2</sub>) and greenhouse gas due to power generation, transportation and other industrial/commercial activities have caused serious climate change and environmental impacts worldwide. Each corporation should immediately implement carbon-reducing measures to mitigate the problems. The first important step is to carry out carbon audit to identify the sources of carbon emission and quantify the carbon footprint of a corporation.

The HKSAR Government is taking the lead to promote carbon audit. HK\$450 million has been reserved under the Environment and Conservation Fund (ECF) to subsidize energy-cum-carbon audit projects and energy efficiency projects for building owners in Hong Kong. The scheme is very much well received by the professional societies and the general public at large. As an active professional institution and one of the green partners in Hong Kong, the Energy Institute is in full support of this initiative by providing timely and quality certified carbon auditor training course to train up more engineers and professionals to appreciate carbon audit and to acquire the necessary skills to conduct the professional carbon audits.

This course has been announced by the Environment Bureau of the HKSAR Government as related to energy-cum-carbon audit projects meeting the training requirements for a professional engineer to register as a qualified service provider to certify energy-cum-carbon audit projects under the ECF.

## Course Objectives

The Certified Carbon Auditor Training Course is designed for engineers and professionals in Hong Kong. After taking the course, the participants will be able to:

- appreciate the function of carbon audits as a means to help business sectors and corporations in estimating their carbon footprints thereby setting objectives to manage and reduce the footprints;
- understand the basic carbon audit processes and learn the skills to undertake such audit, with an appreciation of Hong Kong's requirements in carbon auditing; and
- establish network in the carbon business through certification as certified carbon auditor with the Energy Institute in UK, which has a membership of around 13,500 professionals all over the world.

## **Main Topics**

1. Climate Change and Potential Local Challenges
2. Energy Management
  - Policy and process
  - Data metering and monitoring
  - Data analytical methods
  - Management tools and assessment
3. Energy Auditing
  - Building energy consumption
  - Energy data assessment
  - Quantification of energy waste
  - Risk assessment of energy waste
  - Energy management opportunities
  - Finance and life cycle assessments
4. Carbon Management
  - Environmental management
  - Environmental impact reduction
  - Carbon auditing
  - Green house gas protocols
  - Internal and external verification
  - Trading schemes
  - Carbon audit guidelines in Hong Kong
5. Carbon Footprint Calculator
  - Emissions factors and calculations
  - Reductions versus offset approaches
  - Low carbon approaches and opportunities
  - Energy and carbon reducing solutions: HVAC, heating, lighting, motors, plant/building facilities, controls and maintenance

*Note: Contents are subject to minor change without prior notice.*

## **Examination**

- Participant should pass the examination in order to receive the certificate.
- Time period: 4 hours

## **Key Speakers**

**Mr Trevor FLOYD**, CEng., MEI., CMarEng., MIMarEST., ACIBSE., MCMI., has been independent energy auditor and trainer for approaching 20 years. Mr FLOYD had 13 years working as a marine engineer for Shell, and has vast experience working on government contracts. He is an accredited Carbon Trust auditor and has audited many facilities in Hong Kong and Southern China including Hong Kong Airport and is an authority on energy related matters and has spoken at, and chaired conferences throughout the world, including Hong Kong and Sydney.

### Selected Qualifications and Experience:

- Chartered Marine Engineer
- Accredited Carbon Trust Consultant
- Registered Low Carbon Consultant (CIBSE) – EPCs and DECs
- Accredited Carbon Trust Standard Assessor
- EU - Emissions Trading Scheme verifier
- MSc - Energy / Environmental Technology & Economics
- MBA – Business growth programme
- 1st and 2nd Class Marine Engineering registration (BEng Hons. Equivalent)

- Various Post Graduate Certificates and Diplomas related to Business Excellence, Quality Systems and People Coaching

**Ir Roger LAI**, MSc(Eng), CEng, FEI, MIET, RPE, FHKIE, is currently the President of Hong Kong Association of Energy Engineers and a Distinguished Adjunct Professor at The University of Hong Kong. He was formerly the Director of Electrical & Mechanical Services Department, HKSAR Government (2001-2006). Ir Lai has been very active in promotion of energy efficiency and carbon emission reduction in Hong Kong.

**Ir Dr Michael KH LEUNG**, PhD, CEng, MEI, RPE, MHKIE, is currently the Chairman of Energy Institute (Hong Kong Branch). He is also an Assistant Professor in the Department of Mechanical Engineering at The University of Hong Kong. The main areas of his teaching and research are energy efficiency, renewable energy and building services engineering. He is also experienced in energy audit and carbon audit.

### General Information

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| <b>Date &amp; Time:</b>                    | Lectures: 15 - 17 July 2009 (Wednesday to Friday); 09:30 am to 17:30 pm<br>18 July 2009 (Saturday); 09:30 am to 12:30 pm<br>Examination 18 July 2009 (Saturday); 14:00 pm to 18:00 pm  |
| <b>Venue:</b>                              | 1/F HKPC Building, 78 Tat Chee Ave, Kowloon Tong   |
| <b>Teaching &amp; Learning Activities:</b> | Lectures, assignments and examination<br><i>Note: Lecture and examination will be postponed if typhoon signal No. 8 or above or a black rainstorm warning is hoisted in that morning or afternoon.</i>   |
| <b>Medium of Instruction:</b>              | English  |
| <b>Target:</b>                             | Practicing Engineers, Energy Managers, Energy Auditors, Environmental Officers, Building Services Managers, Plant Managers, etc.   |
| <b>Course Fee:</b>                         | <b>HK\$11,000</b> for Member of Organiser or Supporting Organisations<br>HK\$12,000 for Non-member<br>Notes:<br>1. <b>Complimentary refreshment and lunch</b> will be provided every day.<br>2. A non-member participant is entitled to receive one-year free affiliate membership of the Energy Institute.  |
| <b>Registration:</b>                       | <ul style="list-style-type: none"> <li>• <b>Maximum 40 enrolments</b> on a first-come-first-served basis</li> <li>• Please complete the registration form and submit it by fax to Ms April Li (fax no.: 8143 0048). We shall reply you immediately to acknowledge the receipt of your registration form and give you instruction to pay the course fee. Your enrolment is confirmed only after we received your payment.</li> <li>• Last day of registration on 15 June 2009.</li> </ul> |
| <b>Certificate:</b>                        | <ul style="list-style-type: none"> <li>• Certificate will be issued by <b>Energy Institute</b> and <b>CIBSE</b>.</li> <li>• The certificates enable you to register as a qualified service provider to certify energy-cum-carbon audit projects under the ECF.</li> </ul>  |
| <b>Leaflet &amp; Registration Form:</b>    | Soft version of leaflet and registration form can be downloaded from <a href="http://www.energyinst.org.hk/09carbonaudit.asp">http://www.energyinst.org.hk/09carbonaudit.asp</a>   |
| <b>Enquiry:</b>                            | Ms April Li<br>Tel: 9058 7800, Fax: 8143 0048, Email: <a href="mailto:aprilmnli@yahoo.com.hk">aprilmnli@yahoo.com.hk</a>   |

**To: Ms Li (Fax no.: 8143 0048)**

## Registration Form

# CERTIFIED CARBON AUDITOR TRAINING COURSE

15 – 18 July 2009

Name

(Mr/Ms/Ir/Dr)

\_\_\_\_\_ (Please put the name you want it to be printed in your certificate issued.)

Position

\_\_\_\_\_

Organization

\_\_\_\_\_

Address

\_\_\_\_\_

\_\_\_\_\_

Tel: \_\_\_\_\_

Fax \_\_\_\_\_

Email \_\_\_\_\_

**Course fee (Please tick appropriate box(es) and input your membership number(s) if any.)**

- |                          |                       |                         |
|--------------------------|-----------------------|-------------------------|
| <input type="checkbox"/> | EI Member             | (Membership No.: _____) |
| <input type="checkbox"/> | ASHRAE Member         | (Membership No.: _____) |
| <input type="checkbox"/> | BSOMES Member         | (Membership No.: _____) |
| <input type="checkbox"/> | CIBSE Member          | (Membership No.: _____) |
| <input type="checkbox"/> | HKAEE Member          | (Membership No.: _____) |
| <input type="checkbox"/> | SOEHK Member          | (Membership No.: _____) |
| <input type="checkbox"/> | HK\$11,000            |                         |
| <input type="checkbox"/> | HK\$12,000 Non-member |                         |