

# CERTIFIED CARBON AUDITOR TRAINING COURSE

(Course Code: CA/08/12)

27 - 30 June 2012

## Organiser

## Implementation by



## Supporting Organisations



## Background

This is the eighth intake of the certified carbon auditor training course. 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 Environment and Conservation Fund (ECF).

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 a 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 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.

### **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 over 14,000 individuals and 300 companies 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

## Examination

- Participants should pass the examination in order to receive the certificate.
- Time period: 2 hours
- For those who failed the examination they may re-sit the examination at the next course organised within one year.

## Key Speakers

**Mr Trevor FLOYD**, CEnv, CEng, MEI, CMarEng, MIMarEST, ACIBSE, MCMI, has been independent energy auditor and trainer for 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 and Carbon related matters and has spoken at, and chaired conferences throughout the world, including Hong Kong and Sydney.

### Related Qualifications and Experience:

- United Nations Industrial Development Organisation (UNIDO) – Accredited Energy Expert (ISO50001)
- Chartered Marine Engineer
- Chartered Energy Engineer
- Chartered Environmentalist
- BSI – Associate Consultant (14001 / 16001)
- 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)
- Chairman – West Midlands & Mid Wales branch – Energy Institute
- Chairman – Independent Energy Consultants Group – Energy Services and Technology Association
- Various Post Graduate Certificates and Diplomas related to Business Excellence, Quality Systems and People Coaching

**Ir Dr Michael KH LEUNG**, PhD, CEng, MEI, RPE, MHKIE, is the Immediate Past Chairman of Energy Institute (Hong Kong Branch). He is also an Associate Professor of School of Energy and Environment of City 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.

**Mr Richard LEE** is a Senior Consultant of Hong Kong Productivity Council (HKPC) responsible for energy management and consultancy services and has been working for HKPC for 13 years. He is specialized in the area of energy management consultancy, carbon and energy audit, building automation, energy conservation system design and retrofit. Richard was involved and responsible for the project implementation and development of energy benchmarking system, energy indicators and benchmarks, updating of energy end-use database in various consultancy projects for Electrical and Mechanical Services Department for HKSAR in the past decade. Richard is also helping Drainage Services Department in developing the carbon audit guideline for the major sewage treatment works in Hong Kong in 2010. Mr Lee possesses the following academic and professional qualifications:

- BEng (Hons) in Building Services Engineering of Hong Kong Polytechnic University
- MSc in Mechanical Engineering of Hong Kong University
- CEM, Certified Energy Management of the Association of Energy Engineer
- CEA, Certified Energy Auditor of the Association of Energy Engineer
- Certified Cleaner Production Assessor in China

## General Information

<b>Date &amp; Time:</b>	Lectures: 27 - 29 June 2012 (Wednesday - Friday); 09:30 am to 17:00 pm 30 June 2012 (Saturday); 09:30 am to 12:00 pm
	Examination 30 June 2012 (Saturday); 14:00 pm to 17:00 pm (1-hour preparation time and 2-hour examination time)
<b>Venue:</b>	Room 1020, 1/F, HKPC Building, 78 Tat Chee Ave, Kowloon Tong
<b>Teaching &amp; Learning Activities:</b>	Lectures, assignments and examination <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 HK\$12,000 for Non-member <i>Note: <b>Complimentary refreshment and lunch</b> will be provided every day.</i>
<b>Registration:</b>	<ul style="list-style-type: none"> <li>• <b>Maximum 30 enrolments</b> on a first-come-first-served basis</li> <li>• Please complete the registration form and submit it to Ms April Li (email: <a href="mailto:aprilagc@gmail.com">aprilagc@gmail.com</a> or fax no.: 8143 0048). We shall reply to 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 receive your payment.</li> <li>• Last day of registration: 18 May 2012.</li> <li>• The Organiser reserved the right to cancel the course in the case of low registration rate. All registrants will be informed of the cancellation and refund arrangement on or before 18 June 2012.</li> </ul>
<b>Certificate:</b>	<ul style="list-style-type: none"> <li>• Certificate will be issued by <b>Energy Institute</b> and carry <b>CIBSE CPD accreditation approval</b>.</li> <li>• The certificate is a proof of fulfilling the training requirement for a professional engineer 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/1009carbonaudit.asp">http://www.energyinst.org.hk/1009carbonaudit.asp</a>
<b>Enquiry:</b>	Ms April Li Tel: 2967 8855, Fax: 8143 0048, Email: <a href="mailto:aprilagc@gmail.com">aprilagc@gmail.com</a>