

# CERTIFIED CARBON AUDITOR TRAINING COURSE

(Course Code: CA/11/14)

11<sup>th</sup> Intake

26 – 29 November 2014

Organiser



Implementation by

Supporting Organisations (TBC)



Hong Kong Branch

(TBC)



(TBC)



engineering success  
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營運工程師學會 香港分會

## Background

The emissions of carbon dioxide (CO<sub>2</sub>) and greenhouse gas due to power generation, transportation and other industrial/commercial activities are contributing to 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. As energy consumption is one of the major sources of carbon emissions, it is always effective to reduce carbon footprint through implementing energy saving measures.

As an active professional institution and one of the green partners in Hong Kong, the Energy Institute is active in providing timely and quality certified carbon auditor courses to train engineers and other professionals to understand the audit process and to acquire the necessary skills to conduct 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 & Carbon 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.*

### **Course Delivery**

The course will include a mixture of tutor led training, group discussion and delegate activities and will be assessed through a 2 hour written examination. Training will focus on the carbon reporting protocol developed by the Hong Kong Government and will also cover practical energy management and carbon auditing skills. Delegates will gain practical experience by completing a carbon audit on an example building.

### **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 Chris BURGESS**, has a degree in Mechanical Engineering and is a Chartered Engineer. He has around 30 years' experience within the energy industry and for the past fifteen years as an independent energy consultant. Chris had a number of technical and marketing roles within British Gas and Midlands Electricity over 18 years before establishing Alpha Energy Consultancy in 1998.

Chris specialises in implementing energy management and technical solutions to reduce cost and carbon emissions. He has carried out energy surveys, audits and strategic reviews for a wide range of public and private sector organisations and is experienced in identifying and implementing energy efficiency measures based on both capital investment and staff engagement solutions.

He delivers staff awareness workshops, bespoke energy management and carbon footprint training courses on behalf of the Energy Institute and other organisations. He is a lecturer on Combined Heat & Power (CHP), building energy efficiency and staff engagement for the Energy Institute Advanced Energy Manager qualification and is tutor for the Energy Institute TEMOL open learning scheme. Chris is a regular author of CPD training modules for Energy in Buildings and Industry magazine.

Chris is an accredited Assessor for the Carbon Trust Standard, which is a carbon management certification scheme, and is qualified as Lead Verifier for EN 16001. He has been accredited as Lead Verifier (ISO 14064), under the Climate Registry Scheme, for Green House Gas verification in the US following the verification of GHG emissions at Stanford University, California and Utah Transit Authority, Utah.


**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 Dean and 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.

**Ir 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
- MHKIE, Corporate Member of the Hong Kong Institution of Engineers
- CEM, Certified Energy Manager of the Association of Energy Engineer
- CEA, Certified Energy Auditor of the Association of Energy Engineer
- Certified Cleaner Production Assessor in China
- Registered Energy Assessor under Chapter 610B of HKSAR

### General Information

<b>Date &amp; Time:</b>	Lectures: 26 – 28 November 2014 (Wed - Fri); 09:30 am to 17:00 pm 29 November 2014 (Sat); 09:30 am to 12:00 pm Examination 29 November 2014 (Sat); 14:00 pm to 17:00 pm (1-hour preparation time and 2-hour examination time)
<b>Venue:</b>	HKPC Building, 78 Tat Chee Ave, Kowloon Tong Lectures, assignments and examination
<b>Teaching &amp; Learning Activities:</b>	<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 <b>HK\$12,000</b> 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 35 enrolments</b> on a first-come-first-served basis</li> <li>• Please register through on-line system at the link <a href="http://goo.gl/G4lwHk">http://goo.gl/G4lwHk</a>. We shall reply to you immediately to acknowledge the receipt of your registration 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: 17 October 2014.</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 5 November 2014.</li> </ul>
<b>Certificate:</b>	• Certificate will be issued by <b>Energy Institute</b> and carry <b>CIBSE CPD accreditation approval</b> .
<b>Enquiry:</b>	Ms April Li Tel: 2967 8855, Email: <a href="mailto:aprilagc@gmail.com">aprilagc@gmail.com</a>