



## Technical Seminar on Energy Audits and Commissioning of Built Environment (83111)

In Hong Kong, over 92% of the total electricity consumption comes from the existing buildings. Therefore, good practices in energy management are very important for reducing electricity consumption and saving costs. Energy audit is one of the useful tools to help the building owner to identify the energy management opportunities. Furthermore, commissioning would also ensure the building systems such as HVAC&R systems operate as design intend, implement effectively and conserve more energy. This 3-hour-long course, co-organised with **ASHRAE Hong Kong Chapter**, describes how to perform energy audit step by step, provides the examples of different energy saving opportunities, introduces the HVAC&R commissioning basics and highlights the related ASHRAE standards and services such as Standards 90, 100, 202 and 189.

### Topics To Be Covered

- **Session 1: Energy Audits**
  - Step by step in energy audit procedures
    - Overview of ASHRAE Commercial Building Energy Audits Procedures
    - Defining the levels of effort of commercial building energy audits (Level I, II and III)
    - Best practices for conducting energy audits
    - Examples of energy saving opportunities such as renewables
    - Sample energy audit report and selected summary graphics
  - Highlights of other related ASHRAE energy products and services
    - Standards 90, 100 and 189
    - Performance measurement protocols
    - Energy efficiency guide for existing buildings
    - ASHRAE bEQ (building labeling program)
- **Session 2: Commissioning of the Built Environment – Principles, Process, Procedures, and the Future**
  - HVAC&R system's commissioning basics
  - Highlights of ASHRAE Standard 202-2013, ASHRAE Standard 189, LEED requirements/comparisons
  - Sample HVAC&R and enclosure commissioning examples
  - International strategic directions

### Learning Outcomes

- Acquire the essential knowledge on the energy audit procedures; and
- Understand the fundamental concepts of commissioning of built environment.

### Who Should Attend

- This course is designed for those seeking to learn about and work on commissioning and energy management in building projects, particularly those engineers, project managers and any individuals who wish to have a better understanding of commissioning and energy management in general.

### Speaker

- **Mr Ross D. Montgomery, P.E., CXA, CPMP, BEAP, BEMP, HBDP**

Mr Montgomery is ASHRAE past Society Vice-President, Technology Council Chairman, DRC and DAL, past RVC, and chapter/section President. He has worked in ASHRAE activities for 34+ years, and has served on over 45 committees, councils and boards for ASHRAE. He has authored several Journal articles on bEQ (ASHRAE Building Rating program), HVAC controls, and commissioning, and co-authored the ASHRAE book "Fundamentals of HVAC Control Systems". His expertise includes commissioning of building systems such as HVAC&R systems, energy audit/rating/assessment, IAQ monitoring, maintenance/operations and bEQ ratings. He graduated from the University of South Florida with a BSME. He has his Professional Engineers License, state Mechanical/Electrical Contractors licenses, as well as his Certifications for Commissioning with AABC/ACG, IAQ, Energy Manager, Commissioning, Energy Modeling and Assessor, High Performance Building Design, and Green Building Engineer. He is an ASHRAE Fellow and a past recipient of the ASHRAE awards for Government Service, Exceptional/Distinguished Service, John James International service, Lincoln Bullion membership, and an ASHRAE Technology Award.



### Date, Time & Venue

- 3 hours – 30 July 2015 (Thursday) 14:00 – 17:00.
- Venue – BEC Auditorium, 77 Tat Chee Avenue, Kowloon Tong, Hong Kong (close to Kowloon Tong MTR Station Exit C1).

### Medium of Instruction

- English.

## Course Fee

- HK\$500 (Subject to a maximum discount of 40%)\*
  - \* BEC or ASHRAE Membership Discount – 40% (i.e. \$300 for members of BEC or ASHRAE HK Chapter).
  - Supporting Organisation Membership Discount – 20% (i.e. \$400 for members of supporting organizations).

## Certification

- A Certificate of Attendance is awarded to each attendee.

## Application Deadline

- Enrolment deadline is 5 working days before the seminar commencement date. Late enrolment will be accommodated subject to seat availability.

## Application Form

- Click [here](#) to download the Application Form.

## Terms & Conditions

- Duly completed application form accompanied by payment will be considered for admission;
- Seminar fee is non-refundable, non-transferable and should be received by BEC IEE no later than 5 working days before the commencement of the seminar;
- Admission is made on a first-come-first-served basis;
- Successful applicants will be notified no later than 3 working days before the commencement of the seminar;
- Unsuccessful applicants will be given refund of seminar fees if they have already paid;
- The seminar will be cancelled with full refund when the typhoon signal no.8 or above, or black storm warning is hoisted 3 hours before the seminar commences;
- An official e-receipt will be distributed through email to the participant upon the completion of the seminar;
- BEC reserves the right not to conduct the seminar if the applications are below the required minimum number of participants, and seminar fees received will be refunded. All decisions made by BEC on matters related to the seminars are final;
- Personal data including contact information will be used by BEC for its communications and direct marketing purpose, including newsletters and promotions of events, training seminars and other activities. If you do not wish to receive any further promotional materials from BEC, please send an email to us at [unsubscribe@bec.org.hk](mailto:unsubscribe@bec.org.hk); and
- Information provided will be kept strictly confidential and will not be sold, reused, rented, loaned, or otherwise disclosed to third party.

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Business Environment Council Limited 商界環保協會有限公司 (“BEC”) is an independent, charitable membership organisation, established by the business sector in Hong Kong. Since its establishment in 1992, BEC has been at the forefront of promoting environmental excellence by advocating the uptake of clean technologies and practices which reduce waste, conserve resources, prevent pollution and improve corporate environmental and social responsibility. BEC offers sustainable solutions and professional services covering advisory, research, assessment, training and award programs for government, business and the community, thus enabling environmental protection and contributing to the transition to a low carbon economy.

For more information in BEC, please visit [www.bec.org.hk](http://www.bec.org.hk).

## About BEC Institute of Environmental Education (“BEC IEE”)

BEC IEE, a division of BEC, provides a platform for business managers and decision makers, to advance their knowledge and develop the expertise necessary for environmental decision-making. BEC IEE also facilitates professional development by promoting quality environmental education through various environmental education programmes.

For further enquiries or assistance, please contact BEC IEE at [beciee@bec.org.hk](mailto:beciee@bec.org.hk).

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