

## FREQUENTLY ASKED QUESTIONS (FAQS)

### *Periodic Energy Audit and BCA Energy Auditor Scheme*

#### **Q1. Why should the energy efficiency of building cooling systems be audited?**

The system performance of any building cooling system, including the energy efficient ones, may deteriorate overtime if not properly operated and maintained.

The aim of the periodic energy audit is to ensure that the building cooling system continues to operate as efficiently as per its initial design throughout its life cycle, and comply with the minimum standards stipulated.

#### **Q2. What buildings are subject to the energy audit?**

The following buildings will have to carry out the energy audit:

- Existing buildings that have undergone Major Energy Use Change\*;  
and
- New buildings that have applied for planning permission on or after 1 December 2010.

The following building types are not covered under the *Code on Periodic Energy Audit of Building Cooling System*:

- residential developments,
- industrial buildings,
- railway premises,
- port services and facilities, and
- airport services and facilities.

\* - *A major energy use change refers to the installation, substantial alteration or replacement of a building/ development's water-cooled/ air-cooled chiller(s).*

#### **Q3. Will building owners be informed if they are subject to the energy audit?**

BCA will issue notices to building owners and allow a reasonable timeframe for them to complete the energy audit.

#### **Q4. Is there requirement for the energy audit to achieve a certain result?**

Building owners must ensure that the building cooling system efficiencies meet the minimum system efficiencies stipulated in the *Code on Periodic Energy Audit of Building Cooling System*.

**Q5. What must the building owner do if the result of the energy audit fails to meet the minimum design system efficiency? Must he carry out another round of energy improvement works?**

The owner needs to carry out appropriate remedial and maintenance works to bring the system efficiency back to its design standard or the prescribed minimum system efficiencies.

**Q6. Can the building owner's own employee, such as the facility manager, carry out the energy audit of the system?**

Yes, provided that the employee is a Professional Mechanical Engineer (PE(Mech)) or an Energy Auditor who is registered with BCA.

**Q7. Who are qualified to carry out the energy audit of the cooling systems?**

The energy audit shall be carried out either by a Professional Mechanical Engineer (PE(Mech)) who has in force a practising certificate, or an Energy Auditor who is registered with BCA.

An Energy Auditor is a competent person registered with BCA who may be appointed to carry out the energy audit on the building cooling systems required under the Building Control Act. Professional Mechanical Engineers are not required to register with BCA as an Energy Auditor.

For more information on the duties, criteria and application process to register as an Energy Auditor, please visit:

[http://www.bca.gov.sg/EnvSusLegislation/Registered\\_Energy\\_Auditors.html](http://www.bca.gov.sg/EnvSusLegislation/Registered_Energy_Auditors.html).

**Q8. What are the requirements for the application of an Energy Auditor?**

The registration criteria for application are as follows:

- a. possess at least an engineering or a building-related degree in architecture, building science, facility management, and sustainable building design or any equivalent professional qualification acceptable by the Commissioner of Building Control;
- b. have at least three (3) years of relevant practical experience in central air-conditioning design and installation, or operation, after attaining the abovementioned degree or equivalent professional qualification;
- c. completed two (2) ASHRAE Level III Energy Audits or three (3) Periodic Energy Audits on Building Cooling Systems under the supervision of a PE(Mech) or an Energy Auditor registered with BCA; and
- d. successfully passed interview by the Energy Auditor Registration Committee.

For more information on the duties, criteria and application process to register as an Energy Auditor, please visit:

[http://www.bca.gov.sg/EnvSusLegislation/Registered\\_Energy\\_Auditors.html](http://www.bca.gov.sg/EnvSusLegislation/Registered_Energy_Auditors.html).

Please ensure that **ALL** the qualifying criteria are met before submitting the application form and ensure that all sections are completed with the required supporting documents.

For applicants who have applied before and were rejected or failed the interview, please note that you are not allowed to use the same projects that have been used previously to support your previous application.

Please note that the Energy Auditor Registration Committee's decision is final.

**Q9. Can a non-engineering or building-related degree be considered as a basic qualification?**

Applicants should possess either an engineering or a building-related degree (in architecture, building science, facility management, and sustainable building design) that is awarded by a local university, or any equivalent professional qualification deemed acceptable by the Commissioner of Building Control. Overseas degrees and courses conducted by distance learning will not be accepted unless accredited by BOA, PEB, SISV or IES.

**Q10. When can one start counting relevant experience from?**

Work experience accumulates from the day the applicant starts the relevant job, after attaining either an engineering or a building-related degree (in architecture, building science, facility management, and sustainable building design) that is awarded by a local university, or any equivalent professional qualification deemed acceptable by the Commissioner of Building Control. Overseas degrees and courses conducted by distance learning will not be accepted unless accredited by BOA, PEB, SISV or IES.

**Q11. Will I be allowed to use the title of “BCA-Registered Energy Auditor” on my business card?**

The relevant title can be printed on the business card as long as your application as an Energy Auditor has been endorsed by BCA and in accordance with the validity stated in the certificate you have been awarded. The wordings of the title to be printed on your business card have to strictly adhere to “BCA-Registered Energy Auditor”.

**Q12. Is there a validity period for my certification as an Energy Auditor?**

To maintain high standards of professional competency, the validity period of an Energy Auditor registered with BCA is three (3) years. A renewal application is required to be submitted with a record of the Continuing Professional Development (CPD) activities and the corresponding documentary evidence of participation, upon receiving a Notice from BCA at least two (2) months before expiry of the current certificate. For more information and the submission forms for renewal and CPD record, please visit:

[http://www.bca.gov.sg/EnvSusLegislation/Registered\\_Energy\\_Auditors.html](http://www.bca.gov.sg/EnvSusLegislation/Registered_Energy_Auditors.html).

### Q13. What are the requirements for the renewal of an Energy Auditor and its objectives?

The Continuing Professional Development (CPD) renewal requirements aim to enhance professionalism, promote and ensure continuous learning by the Energy Auditors to maintain competency and achieve their professional goals. The continuing professional development enables the Energy Auditors to acquire knowledge and skills to stay relevant, and be kept abreast of prevailing procedures and standards as well as advances in technologies.

CPD points are obtained from participation in CPD activities which the Energy Auditor chooses to participate in. The range of activities in this CPD framework (see Table below) is not intended to be inclusive but to act as a general guide.

As part of the CPD renewal framework, Energy Auditors are required to keep their own record of the audit projects and CPD activities claimed and submit it upon renewal every three (3) years, together with documentary evidence of participation in the various CPD activities for validation. CPD renewal submission, together with the renewal application form, should be made upon receiving a Notice from BCA which is at least two (2) months before expiry of the current certificate. The activities that are accorded CPD points are listed in the Table below for guidance.

Our CPD scheme requires an Energy Auditor to chalk up at least **30 CPD points** over a 3-year period, or about 10 CPD points a year.

The renewal application and CPD record forms are downloadable from [http://www.bca.gov.sg/EnvSusLegislation/Registered\\_Energy\\_Auditors.html](http://www.bca.gov.sg/EnvSusLegislation/Registered_Energy_Auditors.html).

**Table – Determination of CPD**

No.	Activities	Min. CPD Points For 3-Yearly Renewal = 30 (i.e. min. 10 CPD points per year)
<b><u>Part 1: Energy Audit Project Experience</u></b>		
	Submission of OSE audit reports prepared/ endorsed by renewing Energy Auditor in past 3 years	1 report = 2 CPD points (max 6 points per year)
<b><u>Part 2: Green Building or Energy Related Training and/or Courses *</u></b>		
	<ul style="list-style-type: none"> <li>• Formal study courses (post-grad/ diploma)</li> <li>• Lectures, short courses, conferences, workshops &amp; seminars</li> <li>• In-house training</li> </ul> <p><i>* Including overseas and e-training</i></p>	1 CPD point = 1 contact hour
<b><u>Part 3: Participation in Professional Associations, Committees &amp; Societies</u></b>		
	Members of technical/ working committees of professional associations/ government agencies	3 CPD points per Committee (max 6 points over 3 years)

<b>Part 4: Contribution to Engineering/ Management Knowledge</b>		
a	Conduct lectures, seminars, conferences or training courses	2 CPD points each lecture hour or part thereof
b	Write/ edit published technical articles or papers	2 CPD points per topic (max 6 points over 3 years)

**Note:**

1. *Documentary evidence of participation for above items are to be submitted for validation.*
2. *Renewal submission to be made at least two (2) months prior to certification expiry.*
3. *Contact hour refers to an attendance or involvement lasting one clock hour of not less than 50 minutes. One (1) CPD point is awarded for one (1) contact hour. No CPD point is awarded for an activity/ course lasting less than 50 minutes.*
4. *Committee work submissions to be considered after completion of the committee term.*

**Q14. What happens if I am not able to meet the number of CPD points required for renewal?**

A conditional renewal, for a period of one (1) year, is allowed for Energy Auditors whose Continuing Professional Development (CPD) points fall short of the requirements upon renewal submission every three (3) years.

If the Energy Auditor does not or is unable to make up for the shortfall of points and submit the relevant documentary evidence of CPD participation accordingly by the deadline, the Energy Auditor will automatically not be renewed and his/ her name will be removed from the Energy Auditor Registry.

The conditional renewal grants the Energy Auditor additional time to fulfil the shortfall of CPD points under the renewal requirements, but it does not extend the renewal cycle of the certificate. The Energy Auditor is still required to meet the three-yearly renewal requirements stipulated.

**Q15. Under the renewal requirements, can I carry over excess CPD points?**

Any excess CPD points accumulated can only be carried over to the immediate subsequent year. For example, for an Energy Auditor registered on 1 Oct 2015, 30 CPD points are required for renewal by 30 Sep 2018. If the CPD points obtained during the period of 1 Oct 2017 to 30 Sep 2018 is say 13 points, 3 points can be carried forward to the 1 Oct 2018 to 30 Sep 2020 record.

**Q16. What should I submit for my obtained CPD activities?**

The documentary evidence of the obtained CPD activities may take any one of the following forms:

- a. OSE audit reports with endorsement by the renewing Energy Auditor
- b. Course/seminar leaflet with course synopsis and speaker profile, including duration of course
- c. Course enrolment record
- d. Receipts
- e. Validated/ authenticated Certified True Copy Proof of attendance such as Certificates of attendance or achievement
- f. Attendance list from course organiser
- g. Appointment Letter from respective Committee
- h. Invitation Letter to speak or conduct training
- i. Employer's report or certification
- j. Statutory declaration

Please ensure that **ALL** the renewal requirements are met before submitting the renewal application form and documentation and ensure that all sections are completed with the required supporting documents. Upon submission of all the relevant documents, the Energy Auditor Registration Committee will review the renewal application(s) accordingly. The Energy Auditors will be informed upon approval of their certification renewal and issued a new certificate.

Please note that the Energy Auditor Registration Committee's decision is final.

The renewal application and CPD record forms are downloadable from [http://www.bca.gov.sg/EnvSusLegislation/Registered\\_Energy\\_Auditors.html](http://www.bca.gov.sg/EnvSusLegislation/Registered_Energy_Auditors.html).

## Q17. How do the energy efficiency measures under the Building Control Act and the Energy Conservation Act compare with one another?

Please refer to the table below:

Measures	Building Control Act	Energy Conservation Act *
Requirements and Target Groups	<p><b>1. Submission of Energy Consumption and Building-related Information</b>  <u>Building owners of hotels, office buildings and retail buildings</u> shall submit their building information and energy consumption data annually to BCA, via the online Building Energy Submission System (BESS).</p> <p><b>2. Minimum Environmental Sustainability Standard for Existing Buildings Undergoing Installation or Replacement of the Building Cooling System</b>  <u>Building owners or MCSTs of hotels, office buildings and retail buildings with gross floor area (GFA) of 15,000 m<sup>2</sup> or more, and who are planning to install or replace the building cooling system(s)</u>, shall meet minimum environmental sustainability standards for existing buildings.</p> <p><b>3. Periodic Energy Audit of Building Cooling System</b>            Upon receipt of the Notice issued by the Commissioner of Building Control under the Act, <u>building owners of the following 2 types of buildings shall engage a Professional Mechanical Engineer (PE(Mech)) or Energy Auditor registered with BCA</u> to carry out an energy audit on their chiller system:</p> <ul style="list-style-type: none"> <li>• Any building in respect of which an application for planning permission is submitted on or after 1st December 2010; or</li> <li>• Any building installing or replacing its air-cooled or water-cooled chiller and subject to the minimum standard under the Building Control (Environmental Sustainability Measures for Existing Buildings) Regulations 2013.</li> </ul>	<p><b>1. Registration with NEA</b>  <u>Energy intensive companies in the industry sector</u> shall register with NEA within 6 months of qualifying as a registrable corporation:</p> <ul style="list-style-type: none"> <li>• It has operational control over a business activity which has attained the energy use threshold (54TJ of energy used per calendar year) in at least 2 out of 3 preceding calendar years; and</li> <li>• The business activity is carried out at a single site and is attributable to one of the following sectors:               <ul style="list-style-type: none"> <li>○ manufacturing and manufacturing-related services;</li> <li>○ supply of electricity, gas, steam, compressed air and chilled water for air conditioning; and</li> <li>○ water supply and sewage and waste management.</li> </ul> </li> </ul> <p>Once registered, corporations will be required to implement the following energy management practices:</p> <p><b>2. Appointment of Energy Manager</b>            A registered corporation shall appoint from among its employees not less than one energy manager and notify NEA of the appointment of its first energy manager not later than 30 days after registration.</p> <p><b>3. Periodic Reporting Energy Use</b>            A registered corporation shall submit an annual energy use report, covering each business activity under the operational control of the corporation.</p> <p><b>4. Energy Efficiency Improvement Plan</b>            A registered corporation shall submit an annual energy efficiency improvement plan (period of not less than 1 year and not more than 5 years), covering each business activity under the operational control of the registered corporation.</p>

\* **Source:** <http://app2.nea.gov.sg/energy-waste/energy-efficiency/industry-sector/mandatory-energy-management-practices>