



Full Implementation of the Buildings Energy Efficiency Ordinance and Latest Development of the Codes

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珍惜資源 全民節能



Agenda

- Brief introduction to the BEEO;
- Key requirements;
- Publicity;
- Enforcement;
- Latest Development

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Legislation and Codes

Buildings Energy Efficiency Ordinance (Cap 610)
(BEEO)

Building Energy Code
(BEC)

Energy Audit Code
(EAC)

Technical Guidelines
on BEC (TG-BEC)

Technical Guidelines
on EAC (TG-EAC)

Legislation & Codes (Cont'd)



BEC Coverage

- Hotel & guesthouse
- Educational building
- Community building
- Municipal services
- Hospital & clinic
- Government building
- Airport passenger building
- Railway station
- Commercial building
- Industrial building – **common area**
- Residential building – **common area**
- Composite building –
 - commercial portion
 - **common area** of portion for residential or industrial use

EAC Coverage

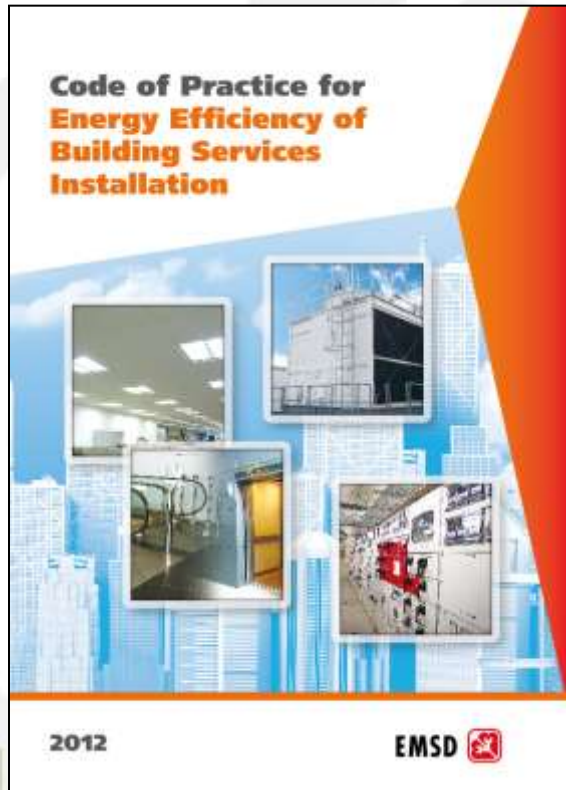
- Commercial building
- Composite building – commercial portion



Legislation & Codes (cont'd)

	Responsible party	Applicability	Compliance
Newly Constructed Building	Developer	Four key types of building services installations	BEC (Full)
Existing Building	Responsible person (tenant, owner)	Major Retrofitting Works (MRW)	BEC (Partial)
Commercial Building	Building owner	Energy Audit	EAC

Key Requirements: Compliance with BEC



- Newly constructed buildings and
- Major retrofitting works in units or common areas

Building services (BS) installations:

1. Lighting;
2. Electrical;
3. Air-conditioning; and
4. Lift and escalator

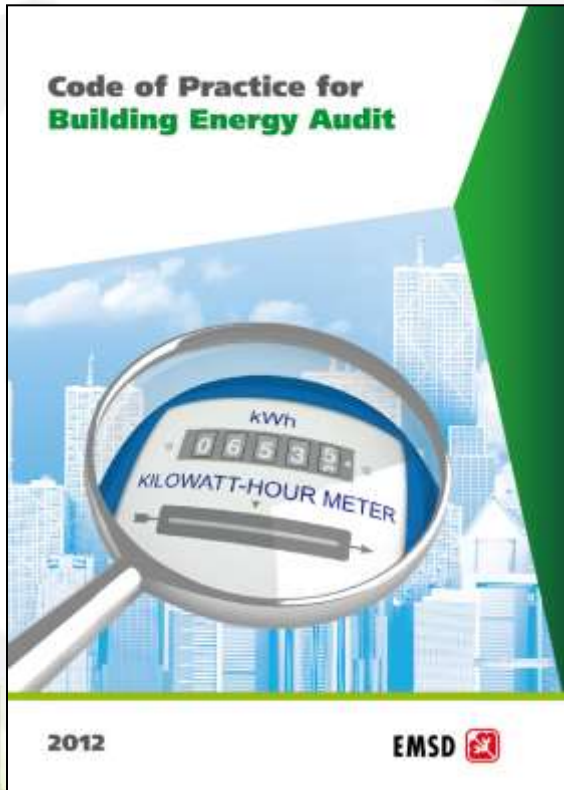
to comply with the min. design standards of the Building Energy Code (BEC)

Responsibility of Building Owner & Responsible Person of an Unit



		Building Owner of CBSI	Responsible Person of an Unit
Newly Constructed building	Issued with COCR	Maintain the Central BS Installations complying with the BEC ed. shown on the COCR	Maintain the BS Installation <u>serving the unit</u> complying with the BEC ed. shown on the COCR
	Any BS Installation covered under a FOC complying with the latest BEC ed.	Maintain <u>that</u> BS installation complying with the BEC ed. shown on the FOC.	
Existing Building	Any BS Installation covered under a FOC complying with the latest BEC ed.	Maintain <u>that</u> BS installation complying with the BEC ed. shown on the FOC.	

Key Requirements (Cont'd) Compliance with EAC



Commercial buildings

Office, shops, entertainment facilities;
Trade, business, profession

Commercial portion of composite buildings

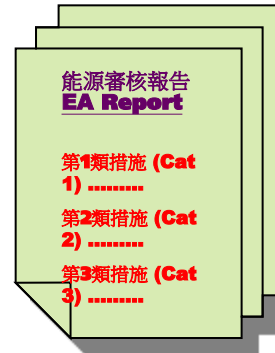
- Conduct energy audit for central BS installations every 10 years

Key Requirements of BEEO (Cont'd)



Display Energy Audit Form

- Obtain from Registered Energy Assessor (REA) the Energy Audit Form with Energy Utilization Index (EUI in MJ/m²/annum or kWh/m²/annum) and Energy Audit Report
- Exhibit Energy Audit Form at building main entrance



Form EES 表格 EES 機電工程署 EMSD

The Government of the Hong Kong Special Administrative Region
Building Energy Efficiency Ordinance (Chapter 610, Section 22)
Energy Audit Form

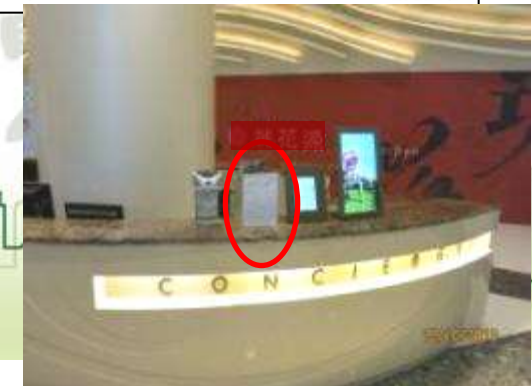
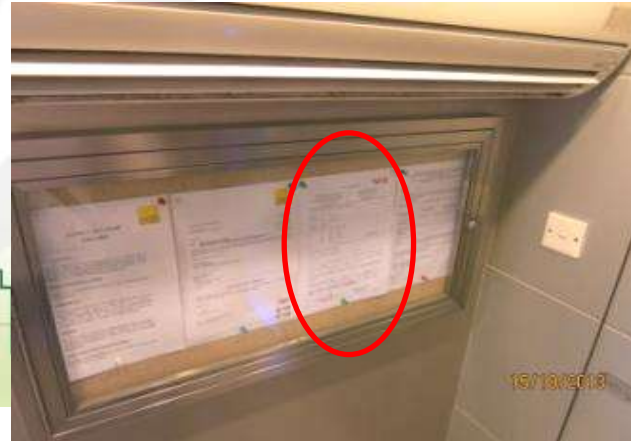
香港特別行政區政府
建築物能源效率條例
(第610章 第22條)
能源審核表格

Section A 第 I 部 : General information -- 一般資料

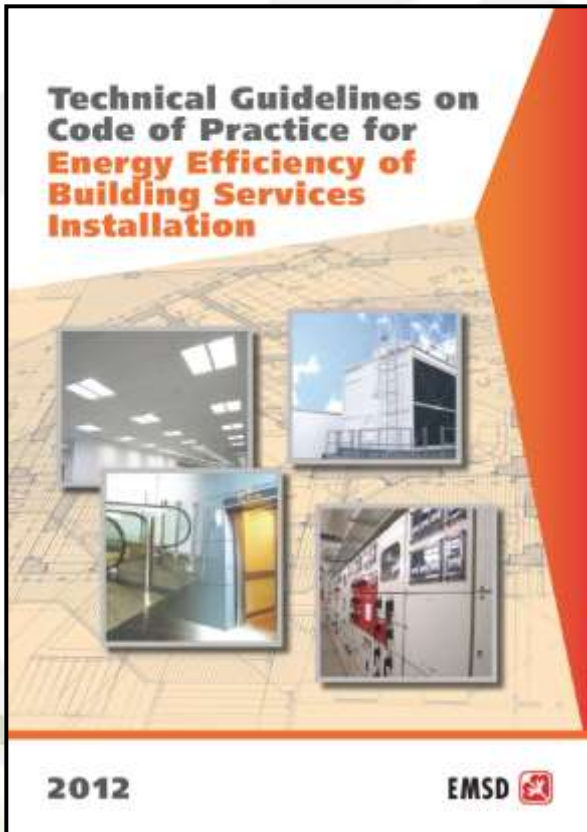
Name of Building 建築物的名稱
Address of Building 建築物的地址
Building Use 建築物的用途
Floor Area 樓面面積
Total Floor Area 總樓面面積

Section B 第 II 部 : Declaration 聲明

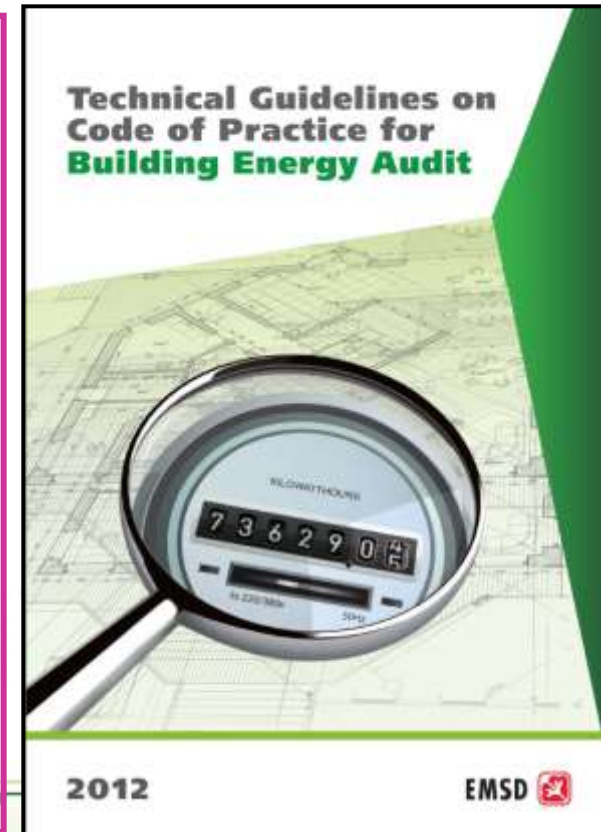
To: Building owner (建築物的擁有人)
I, the Director of Electrical and Mechanical Services, hereby declare that the Building Energy Audit Report is accordance with section 22 of the Building Energy Efficiency Ordinance (Chapter 610) of the Government of the Hong Kong Special Administrative Region.



Compliance with the BEC and EAC



- Provide an overview and explanations of legislative requirements and the engineering requirements of BEC and EAC
- Provide the good engineering practices for enhanced energy efficiency and energy audit results



Publicity



Briefings, Seminars, Talks	<ul style="list-style-type: none">• More than 100 nos. since Jan 2011<ul style="list-style-type: none">– covering academia, professionals, engineering trades, business sector, property management companies and building owners, etc.– more than 13,000 audiences attended
Publications	<ul style="list-style-type: none">• Posters, leaflets and pamphlets are dispatched through various channels (e.g. seminars, site inspections and etc.)
Advisory Letter	<ul style="list-style-type: none">• Issue of advisory letters to alert the responsible parties of other target buildings/premises
Outreaching Programme	<ul style="list-style-type: none">• to be commenced in Dec 2014 to enhance awareness to major retrofitting works (MRW)• To collect information of MRW

Publicity (Cont'd)



- Workshops and seminars to the trade and the public
 - HK & Kowloon Electrical Engineering & Appliances Trade Workers Union
 - Property management companies
 - Building management committees (w/ HAD)
- Conduct briefing sessions for the REAs:
 - Jul/Aug 2014
 - End of 2013

Publicity (Cont'd)



Presentation material uploaded to the website of the BEEO



Enforcement

- Close liaison with
 - HK Property Management Association
 - BD, ArchSD, Housing Department, HAD, LCSD, FEHD and etc.
 - MTRC, Hospital Authority, Airport Authority
- Publicity visit and enforcement inspection
 - Advisory letter;
 - Letter carrying legal effect issued under section 29 of the BEEO
 - Improvement Notice issued under section 26 of the BEEO

Implementation of BEEO



Stage One Declaration	More than 500 nos.
Application for Certificate of Compliance Registration	More than 20 nos.
Form of Compliance	More than 2000 nos.
Energy Audit	More than 1700 nos.

Schedule 5 of BEEO

Issue date of OP	Deadline
After 1987 (Batch 1)	20.9.2013
1978 – 1987 (Batch 2)	20.9.2014
1970 – 1977 (Batch 3)	20.9.2015
Before 1970 (Batch 4)	20.9.2016

Improvement Notice (IN)



Prosecution after specified period



The First Prosecution Case

- Conducted at the Eastern Magistrates' Courts on *4 November 2014*.
- Against belated first energy audit.
- The Incorporated Owners of the relevant building were convicted of contravening the relevant requirements and fined \$4,850 in total.
- EMSD will strictly enforce the law and is also progressively taking prosecution action

Revised LPD Standards



- Gazetted on 28.2.2014
- In general, it contributes to an improvement by 10 to 15% in lighting energy efficiency of buildings

Type of Space	Maximum Allowable LPD (W/m ²)	
	Initial version	Rev. 1
Car Park	6	5
Corridor	10	8
Office	15	13
Public Circulation Area	15	13
Restaurant	20	17
Retail	20	17
Staircase	8	7

Extracted from *Building Energy Code (BEC) 2012 Edition (Rev. 1)*

Revised LPD Standards



EE1

EE4

Submission	Date
Stage One Declaration	Signed by a developer on or after 28 August 2014
Form of Compliance	Signed by an REA on or after 28 November 2014

Technical Circular No. 2/2014



- The Form EE-SU is revised to:-
 - require the REA to submit a copy of letter, e-mail or delivery note/receipt, etc. to certify that a FOC and its copy have been sent to the relevant responsible person and property management company / owner of the building
 - require return of the name of premises (i.e. building and/or unit / common area) in order to avoid mismatching the Form EE-SU with a master form (i.e. Form EE1, Form EE2, Form EE3 or Form EE4) of another premises

Review of BEC and EAC

- Being reviewed by the Technical Taskforce and Working Groups of Mandatory Implementation of BEC
 - to take advantage of new technologies;
 - to capture prevailing good practices;
 - to tighten energy efficiency requirements with reference to the development trend worldwide;
 - to address the community aspiration and comments received during the implementation of the BEEO.
- Anticipated to complete the review in 2015

BEEO's Website

<http://www.beeo.emsd.gov.hk/>



機電工程署
EMSD

ENG 繁體 简体

《建築物能源效益條例》
The Buildings Energy Efficiency Ordinance

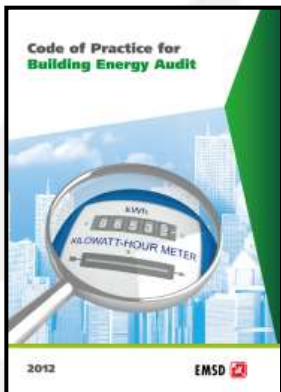
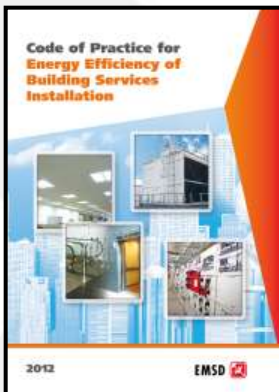
空調裝置
Air-conditioning installation

電力裝置
Electrical installation

升降機及自動梯裝置
Lift & escalator installation

照明裝置
Lighting installation

Energy Audit Form
能源審核表格



Presentation materials of REA briefing sessions

ABOUT BEEO	CODES AND FORMS	CIRCULAR	REGISTER & LIST	REGISTERED ENERGY ASSESSOR (REA)	PUBLICITY	FAQS	USEFUL LINKS
<p>About BEEO</p> <p>Background</p> <p>Appeal Board</p> <p>Disciplinary Board</p>	<p>Background</p> <p>About 90% of total electricity consumption in Hong Kong is contributed by buildings. Through enhancement of building energy efficiency, the Government can reduce greenhouse gas emissions and improve energy efficiency. In October 1998, the Electrical and Mechanical Services Department introduced the Building Energy Efficiency Scheme for Buildings to promote the application of Building Energy Code (BEC) under the Buildings Energy Efficiency Ordinance (the Ordinance) which is to encourage building owners to improve energy efficiency. Buildings under the voluntary Scheme is not regarded as having complied with the Ordinance.</p> <p>The 3 key requirements of the Ordinance</p> <p>For newly constructed buildings, developers or building owners should ensure that the building installation therein, namely, lighting installation, electrical installation, comply with the standards of the Building Energy Code (BEC).</p>						

- Specified Forms
- Technical guidelines

- Register of REA
- List of Stage One Declaration, FOC, EA Form and IN
- Register of COCR

- Frequently Asked Questions



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能源效益事務處

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Website : <http://www.beeo.emsd.gov.hk>



Thank You!

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