

## **Buildings Energy Efficiency Bill**

### **The Administration's response to Action Items at the Bills Committee meeting on 26 February 2010**

#### **Regulation on the unit electricity consumption of building services installations**

We are not aware of any overseas example in regulating the unit electricity consumption of building services installations. The amount of electricity consumption by building services installations will depend on the building type, design, size, usage pattern etc., and is not directly comparable. It would be very difficult to regulate the unit electricity consumption of the four types of building services installations covered in the Buildings Energy Efficiency Bill (the Bill) without interfering with their economic and operational requirements.

#### **Responsibility of developers**

2. Under clause 8 of the Bill, developers are required to submit a stage one declaration to the Director of Electrical and Mechanical Services (DEMS) within two months after obtaining the consent to the commencement of building works for superstructure construction. The stage one declaration is to declare that suitable design provisions are included to enable compliance with the specified standards and requirements. Within four months after obtaining the occupation approval, developers are required to submit a stage two declaration under clause 9 of the Bill to confirm compliance. We have clearly specified in clauses 8 and 9 that the responsibilities to submit stage one and stage two declarations lie with the developer of the building, and the duty will not be transferred to individual owners. Samples of the stage one and stage two declarations, as well as the supplementary information form are at **Annexes A, B and C** respectively.

3. In light of the Bills Committee's comments, we will consider increasing the penalty or imposing daily default fine for contravention by developers to enhance the deterrent effect. As the requirements on issuing occupation approval are mainly related to safety requirements, the nature of which is different from the proposed scope of control of the Bill, we consider it inappropriate to withhold the issue of occupational

approval until confirmation of compliance with the Bill.

### **Scope of major retrofitting works**

4. Schedule 3 of the Bill defines major retrofitting works. Apart from covering the addition or replacement of a main component of a prescribed central building services installation, major retrofitting works also include the addition or replacement of a building services installation specified in a code of practice under the same series of works that cover not less than 500 m<sup>2</sup> within 12 months in a unit or a common area of a prescribed building. To prevent evasion of liability by downsizing the retrofitting works to below 500 m<sup>2</sup>, we have proposed a set of relevant factors to be considered in determining whether the works should reasonably be regarded as being under the same series of works. Relevant factors are set out in Note (3) of Schedule 3 and will be considered on a case-by-case basis.

5. As stated in LC Paper No. CB(1) 1064/09-10(16), the proposed 500 m<sup>2</sup> threshold has taken account of extensive consultation with relevant trades and aimed to achieve a balance between the promotion of energy saving and the compliance implication in particular on business environment. We are of the view that the proposed threshold is appropriate in achieving the balance.

### **Duty to obtain Form of Compliance for major retrofitting works**

6. Responsible persons and owners are required to obtain a Form of Compliance issued by a registered energy assessor within two months after the completion of the major retrofitting works in respect of any building services installation. Clauses 17(1) and (2) clearly specify that the Form of Compliance is to be issued in respect of that particular building services installation which undergoes major retrofitting works. The Form of Compliance does not cover other existing building services installations located within the same area that have not undergone major retrofitting works.

7. Under clause 12(2), for buildings that have obtained a Certificate of Compliance Registration, owners of such buildings must ensure that the central building services installations in the buildings are maintained to a standard not lower than that applied in the first Certificate

of Compliance Registration issued in respect of the building. If a Form of Compliance has been issued for major retrofitting works being carried out in pursuant to clause 17, the installation is to be maintained to a standard not lower than that applied in the latest Form of Compliance issued in respect of the installation. Similar duties for responsible persons in respect of building services installations that are not the central building services installations of such buildings are set out in clause 12(3).

### **Grading system for buildings**

8. Clause 46 of the Bill empowers DEMS to specify forms for the purposes of the Bill, including the energy audit form which contains information regarding the energy utilization index of a building. If in future grading is to be used in lieu of or in addition to energy utilization index in presenting the energy consumption of the building in the form, the Department of Justice advises that the Director will be required to specify a new form under clause 46.

9. Clause 23 of the Bill imposes duty on owners of buildings to exhibit energy audit form in a conspicuous position at the main entrance of the building. Such arrangement makes the information on energy utilization index of a building available to the public. The Department of Justice advises that legislative amendments are not required for uploading publicly available information onto website of relevant departments.

10. As stated in LC Paper No. CB(1) 1064/09-10(16), the proposed mandatory energy audit requirement would enable the Administration to collect the necessary information for building up relevant database of energy consumption of buildings, which is requisite for the setting up of a grading scheme in the long run. We will consult our Trade Task Force and Technical Task Force on the development of a grading system when sufficient data have been collected.

11. In Hong Kong, one of the commonly adopted voluntary green building systems is the Building Environmental Assessment Method (BEAM) launched by the BEAM Society in 1996. The BEAM covers various assessment criteria in respect of the environmental sustainability of buildings, including site aspects, materials aspects, energy aspects,

water aspects, indoor environment quality, as well as innovative and performance enhancement. Compliance with the Building Energy Codes is the minimum energy performance requirement in the latest edition of the BEAM.

12. The Hong Kong Green Building Council (HKGBC) was inaugurated in November 2009 with four founding members, namely the Business Environment Council, BEAM Society, Professional Green Building Council and the Construction Industry Council. In light of the need to develop an assessment method that caters for Hong Kong's unique environment, HKGBC will develop a distinctive green building assessment method for Hong Kong, taking into consideration local characteristics such as high-rise and high density environment as well as sub-tropical climate.

### **Experience of Singapore and the United Kingdom in promoting green buildings**

13. Singapore's Green Mark Scheme is a green building assessment system which covers various assessment criteria on green building performance. Besides energy efficiency, the assessment criteria include other aspects such as site environment, water, indoor environmental quality etc. In respect of energy efficiency, meeting certain energy codes issued by the Singapore Government is a prerequisite. The weighting of different assessment criteria and the scoring of the Green Mark Scheme are set out at **Annex D**.

14. In England and Wales, the Energy Performance of Buildings (Certificates and Inspections) (England and Wales) Regulations 2007 requires the owner of a building to make available a valid Energy Performance Certificate (EPC) to a prospective buyer or tenant. The EPC shall be accompanied by a recommendation report, which contains recommendations for the improvement of the energy performance of the building. Seven energy efficiency ratings, from A to G, are used in the EPC where A is the best and G the worst in energy performance. The scoring is computed based on the energy use per square meter of floor area.

## **Estimated impact on the product market after the introduction of the mandatory scheme**

15. It is anticipated that with the requirement to comply with the Building Energy Codes for construction of new buildings and major retrofitting works in existing buildings, there will be greater demand from building owners and designers on more energy efficient equipment, such as chillers with high coefficient of performance<sup>1</sup>. This will promote the market development for more energy efficient installations in the market.

**Environment Bureau**

**Electrical and Mechanical Services Department**

**March 2010**

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<sup>1</sup> Coefficient of performance is the ratio of output cooling capacity to the input power.

## Form EE1 表格 EE1

The Government of the Hong Kong  
 Special Administrative Region  
 Buildings Energy Efficiency Ordinance  
 (Chapter XXX, Section 8)  
 Form of stage one declaration at design  
 Stage

香港特別行政區政府  
 《建築物能源效益條例》  
 (第 XXX 章第 8 條)  
 設計階段的首階段聲明表格

Official use only  
 此欄不用填寫

Receiving date 收件日期：  
 \_\_\_\_\_

## Note 注意：

Please read the "Notes to Complete this Form" and complete all the items in block letters.

請閱讀於附頁的「填寫本表格的須知事項」，並以正楷填寫各項資料。

## Section A 甲部：Information of Building 建築物資料

Name of Building: 建築物名稱：	English 英文	
	Chinese 中文	
Address of Building: 建築物地址：	English 英文	
	Chinese 中文	

## Section B 乙部：Declaration 聲明

To : The Director of Electrical & Mechanical Services  
 致：機電工程署署長

1. In accordance with Section 8 of the Buildings Energy Efficiency Ordinance (Chapter XXX), I, (full name) \_\_\_\_\_, Registered Energy Assessor (Registration No. \_\_\_\_\_), declare that all building services installations to be provided by the developer in the proposed building at or before the time when a stage two declaration is made in respect of the building are designed, and will be installed and completed, in accordance with the specified standards and requirements.

根據《建築物能源效益條例》(第 XXX 章)第 8 條，本人作為註冊能源效益評核人(註冊號碼 \_\_\_\_\_)(姓名) \_\_\_\_\_，現聲明有關擬建的建築物於作出次階段聲明之時或之前由發展者在該建築物內提供的所有屋宇裝備裝置，均按照指明標準及規定設計，並將會按照該等標準及規定裝設及完成。

Signature of Registered Energy Assessor \_\_\_\_\_ Date \_\_\_\_\_  
 註冊能源效益評核人簽名 \_\_\_\_\_ 日期 \_\_\_\_\_

2. In accordance with Section 8 of the Buildings Energy Efficiency Ordinance (Chapter XXX), we, (full name) \_\_\_\_\_, the Developer, declare that all building services installations to be provided by us in the proposed building at or before the time when a stage two declaration is made in respect of the building are designed, and will be installed and completed, in accordance with the specified standards and requirements.

根據《建築物能源效益條例》(第 XXX 章)第 8 條，我們作為發展者(姓名) \_\_\_\_\_ 現聲明有關擬建的建築物於作出次階段聲明之時或之前由我們在該建築物內提供的所有屋宇裝備裝置，均按照指明標準及規定設計，並將會按照該等標準及規定裝設及完成。

Company chop / Signature of Developer \* \_\_\_\_\_ Date \_\_\_\_\_  
 發展者公司蓋印 / 簽署 \* \_\_\_\_\_ 日期 \_\_\_\_\_

## Notes to Complete this Form 填寫本表格的須知事項

1. Incomplete or erroneous information in this form may cause hiatus or delay in processing the submission.  
在本表格內有關資料如有不全或錯漏，可能導致處理所呈交的文件時出現暫停或延誤。
2. The Director of Electrical and Mechanical Services (the Director) may request the person concerned to submit relevant supplementary information to satisfy the requirements of all the items in this form.  
機電工程署署長（署長）可要求有關人士提供補充資料以滿足本表格內所有項目的要求。
3. The person concerned shall inform the Director of any change in information and data, that were previously submitted to the Director.  
過往已經呈交給署長的資料及數據若有任何變動，有關人士必須知會署長。
4. This form shall be submitted with Form EE-S.  
本表格必須連同表格 EE-S 呈交。

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## Form EE2 表格 EE2

The Government of the Hong Kong  
Special Administrative Region  
Buildings Energy Efficiency Ordinance  
(Chapter XXX, Section 9 and 10)  
Certificate of Compliance Registration  
(Form of Stage 2 Declaration)

香港特別行政區政府  
《建築物能源效益條例》  
(第 XXX 章第 9 及 10 條)  
遵行規定登記證明書  
(次階段聲明表格)

Official use only  
此欄不用填寫  
Receipt Number 收據編號：

Receiving Date 收件日期：

## Note 注意：

Please read the "Notes to Complete this Form" and complete all the items in block letters.

請閱讀於附頁的「填寫本表格的須知事項」，並以正楷填寫各項資料。

## Section A 甲部：Information of Building 建築物資料

Name of Building: 建築物：	English 英文	
	Chinese 中文	
Address of Building: 建築物地址：	English 英文	
	Chinese 中文	

## Section B 乙部：Declaration 聲明

To: The Director of Electrical & Mechanical Services

致：機電工程署署長

1. In accordance with Section 9 of the Buildings Energy Efficiency Ordinance (Chapter XXX), I, (full name) \_\_\_\_\_, Registered Energy Assessor (Registration No. \_\_\_\_\_),  
(i) declare that all building services installations to be provided by the developer in the building at or before the time when the declaration is made have been designed, installed and completed in accordance with the specified standards and requirements, and (ii) confirm that I have carried out inspection on (date) \_\_\_\_\_ and the results of the inspection are satisfactory.

根據《建築物能源效益條例》(第 XXX 章)第 9 條，本人作為註冊能源效益評核人(註冊號碼 \_\_\_\_\_) (姓名 \_\_\_\_\_)，(i) 現聲明有關擬建的建築物於作出聲明之時或之前由發展者在有關建築物內提供的所有屋宇裝備裝置，均已按照指明標準及規定設計、裝設及完成，(ii) 確認本人已於 (日期) \_\_\_\_\_ 進行檢查而檢查結果是滿意的。

Signature of Registered Energy Assessor \_\_\_\_\_ Date \_\_\_\_\_  
註冊能源效益評核人簽名 \_\_\_\_\_ 日期 \_\_\_\_\_

2. In accordance with Section 9 of the Buildings Energy Efficiency Ordinance (Chapter XXX), we, (full name) \_\_\_\_\_, the Developer, declare that all building services installations to be provided by the developer in the building at or before the time when the declaration is made have been designed, installed and completed in accordance with the specified standards and requirements.

根據《建築物能源效益條例》(第 XXX 章)第 9 條，我們作為發展者(姓名) \_\_\_\_\_ 現聲明有關擬建的建築物於作出聲明之時或之前由我們在有關建築物內提供的所有屋宇裝備裝置，均已按照指明標準及規定設計、裝設及完成。

Company chop / Signature of Developer \* \_\_\_\_\_ Date \_\_\_\_\_  
發展者公司蓋印 / 簽署 \* \_\_\_\_\_ 日期 \_\_\_\_\_

## Section C 丙部：Registration 註冊 (To be completed by EMSD 由機電工程署填寫)

Registration No. 註冊編號： \_\_\_\_\_ Expiry Date 屆滿日期： \_\_\_\_\_

Pursuant to Section 10 of the Buildings Energy Efficiency Ordinance (Chapter XXX), I certify that the above certificate issued by the Registered Energy Assessor and Developer was received and registered.

茲根據《建築物能源效益條例》(第 XXX 章)第 10 條之規定，證明已收到由註冊能效評核人及發展者簽發之上述證明書，並且予以登記。

\_\_\_\_\_  
Date  
日期

\_\_\_\_\_  
( \_\_\_\_\_ )  
for Director of Electrical and Mechanical Services  
機電工程署署長

( \_\_\_\_\_ ) 代行)



### Notes to Complete this Form 填寫本表格的須知事項

1. Incomplete or erroneous information in this form may cause hiatus or delay in processing the submission.  
在本表格內有關資料如有不全或錯漏，可能導致處理所呈交的文件時出現暫停或延誤。
2. The Director of Electrical and Mechanical Services (the Director) may request the person concerned to submit relevant supplementary information to satisfy the requirements of all the items in this form.  
機電工程署署長（署長）可要求有關人士提供補充資料以滿足本表格內所有項目的要求。
3. The person concerned shall inform the Director of any change in information and data, that were previously submitted to the Director.  
過往已經呈交給署長的資料及數據若有任何變動，有關人士必須知會署長。
4. This form shall be submitted with Form EE-S.  
本表格必須連同表格 EE-S 呈交。
5. Refund of fees will not be allowed.  
已繳費用概不發還。

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## Form EE-S 表格 EE-S

The Government of the Hong Kong  
Special Administrative Region  
Building Energy Efficiency Ordinance  
(Chapter XXX, Section 8, 9 and 10)  
Supplementary Information for Forms EE1 and EE2

香港特別行政區政府  
《建築物能源效益條例》  
(第 XXX 章第 8,9 及 10 條)  
表格 EE1 及 EE2 的補充資料

Official use only  
此欄不用填寫

Receiving date 收件日期 : \_\_\_\_\_

## Note 注意 :

This form is submitted together with the following form (please tick in the only one appropriate box):

本表格連同以下表格呈交 (請只在其一適當空格加上「✓」號):

Form 表格 EE1

Form 表格 EE2

## Section A 甲部：General Information 一般資料

Name of Building: 建築物名稱：	English 英文	
	Chinese 中文	
Full name of Developer: 發展者的名稱：	English 英文	
	Chinese 中文	
Address of Developer: 發展者的地址：	English 英文	
	Chinese 中文	
Particulars of Contact Person 聯絡人資料：		
Name of Contact person: 聯絡人姓名：	English 英文	Mr./Ms.* _____
	Chinese 中文	_____ 先生/女士 *
Contact Telephone No. 聯絡電話：	_____	Fax No. 傳真號碼： _____
E-mail Address 電郵地址：	_____	
Type of Building 建築物類別：(please tick as appropriate 請於空格內加上「✓」號)		
<input type="checkbox"/> Commercial 商業	<input type="checkbox"/> Community 社區	<input type="checkbox"/> Hospital, clinic or rehabilitation center 醫療
<input type="checkbox"/> Residential 住宅	<input type="checkbox"/> Municipal 市政	<input type="checkbox"/> Composite (commercial & industrial) 綜合 (工貿)
<input type="checkbox"/> Industrial 工業	<input type="checkbox"/> Government 政府	<input type="checkbox"/> Composite (commercial & residential) 綜合 (商住)
<input type="checkbox"/> Hotel and guestroom 旅館	<input type="checkbox"/> Railway station 鐵路車站	<input type="checkbox"/> Airport passenger terminal building 機場客運大樓
<input type="checkbox"/> Educational 教育	<input type="checkbox"/> Other 其他 (please specify 請註明)： _____	
Gross floor area of building 淨樓面面積：	_____	m <sup>2</sup> 平方米
Internal floor area of building 建築物內部樓面面積： (Defined in the Building Energy Code) (定義見於《建築物能源效益守則》)	_____	m <sup>2</sup> 平方米
Please briefly describe the building information (e.g. number of blocks & podiums, number of floors, height, facilities, etc.): 請簡述建築物的資料 (例如：大樓和平台的數量、樓層、高度、設施等。)		
_____		
Is this an amendment / substitution * of previous submission (Please put a "✓" & fill as appropriate) 以往之申請是否有作修改/替換 (請於空格內加上「✓」號)		
<input type="checkbox"/> No 否	<input type="checkbox"/> Yes, previous submission date 以往申請之日期： _____	

Version of Building Energy Code to be complied with:

符合《建築物能源效益守則》之版本為： \_\_\_\_\_

For Form EE2, we enclose the following technical forms and have put a "✓" against the appropriate box  
就表格 EE2 之申請,現附上下列技術表格,並於空格內加上「✓」號。

Form 表格 EE-EL	<input type="checkbox"/> Yes 有	<input type="checkbox"/> N/A 不適用	Form 表格 EE-LG	<input type="checkbox"/> Yes 有	<input type="checkbox"/> N/A 不適用
Form 表格 EE-AC	<input type="checkbox"/> Yes 有	<input type="checkbox"/> N/A 不適用	Form 表格 EE-LE	<input type="checkbox"/> Yes 有	<input type="checkbox"/> N/A 不適用
Form 表格 EE-PB	<input type="checkbox"/> Yes 有	<input type="checkbox"/> N/A 不適用			

## Section B 乙 部 : Supplementary Information 補充資料

Note 注意 :

For Form EE1, please complete part (a) in this section. 表格 EE1 之申請, 請填寫(a)部份

For Form EE2, please complete part (b) in this section. 表格 EE2 之申請, 請填寫(b)部份

### (a) Form 表格 EE1

Date of "Consent to the commencement of building works for superstructure construction of the building" issued by Building Authority:

由建築事務監督發出有關上蓋建築物的建築工程展開同意書之日期:

(Please attach the copy of the above document together with the site location plan / map \* in A4 size for substantiation)

(請附上上述之文件副本及 A4 尺吋之工地位置圖/地圖\*以茲證明)

Anticipated / Actual \* construction commencement date: \_\_\_\_\_

預算/實際\*之開工日期: \_\_\_\_\_

Anticipated occupation approval date: \_\_\_\_\_

預算之佔用准許(入伙)日期: \_\_\_\_\_

### (b) Form 表格 EE2

Reference No. 參考編號: \_\_\_\_\_

(As stated in EMSD's acknowledge letter for Stage 1 Declaration)

(列於機電工程署為首階段聲明發出之通知信上)

Date of "Permit to occupy a new building" issued by Building Authority: \_\_\_\_\_

由建築事務監督發出有關上蓋建築物的佔用准許(入伙)日期: \_\_\_\_\_

(Please attach the copy of the above document for substantiation)

(請附上上述之文件副本以茲證明)

Occupation approval document number: \_\_\_\_\_

佔用許可文件之編號: \_\_\_\_\_

Exemption granted by the Director under Section 4 or Section 15 or Schedule 2 of this Ordinance:

由署長根據本條例第 4 條、第 15 條或附表 2 批予之豁免:

No 有

Yes 沒有

Reference No. and date of the Director's exemption letter: \_\_\_\_\_

由署長發出的豁免信之參考編號及日期: \_\_\_\_\_

Reference No. 參考編號 \_\_\_\_\_ Date 日期 \_\_\_\_\_

Installation(s) exempted 獲豁免的裝置: \_\_\_\_\_

Signature of Registered Energy Assessor

註冊能源效益評核人簽署 \_\_\_\_\_

Date

日期 \_\_\_\_\_

### Green Mark Scheme for Non-residential Buildings in Singapore

Assessment criteria	Weighting (%)
Energy efficiency★	56
Water efficiency	10
Indoor environmental quality	6
Environmental protection	23
Other green features	5

Scoring	Rating
90 and above	Platinum
85 to < 90	Gold <sup>Plus</sup>
75 to < 85	Gold
50 to < 75	Certified

Remarks:

- ★ In respect of energy efficiency, meeting certain energy codes issued by the Singapore Government is a prerequisite.