



## Editor Note

On behalf of the editorial team, I would like to say KUNG HEI FAT CHOY to all of our members and wish every one of us will have a prosperous new year of OX. Some of the highlights of this issue are:

**Harnessing Facilities Competence for Management Excellence-** in the first round of main theme of CPD covering lift safety and energy saving, we revealed that the overwhelming support had been given from both our members and non-members in which there were over 40 practitioners in attendance. Looking ahead, our HKIFM Programme Director will continue to promote the CPD extending the topics of Zero Carbon Operations and Carbon Audit in a way to drive the professional standing of the institution to the community.

**Fulfilling Social Responsibility-** To foster the drive for the protection of our environment, HKIFM attended the Technical Taskforce on the Mandatory Implementation of the Building Energy Code. Since this code is still not widespread acceptance that further in-depth review, consultation, promotion and education will be rolled out before legislation. In the meantime, HKIFM will carry out a mini-survey to tap the view and acceptance of our members on this pressing issue.

**Heightening the professional status-** HKIFM was successfully conducted the consultation forum with members to formulate and consolidate the direction of platform for the Urban Renewal Strategy (URS) from facilities management perspectives. Our Founding President, Dr M W CHAN held the forum with active participation of our members in the presence of the official from the Bureau. Upon the first forum, HKIFM will further strengthen our position in URS as part of our commitment to contributing our expertise for this critical consultation of far-reaching effects on our life in Hong Kong.

## 編者按語

『恭喜發財』! 本人謹代表編輯組仝人恭祝大家牛年萬事如意。

**追求卓越管理** - 本年首個持續專業發展專題「升降機及自動梯安全」深受歡迎，超過40位業界人士參與。本會的課程總監會繼續推廣更多不同類型的持續專業發展專題，包括「零碳營運管理」及「碳審計」。

**履行社會責任** - 為緩減全球暖化和對付空氣污染問題，本會出席《建築物能源效益守則》強制實施技術工作小組，由於守則尚未獲廣泛接納，正式立法前將推出更多諮詢、宣傳及教育工作。本會亦會就此題目進行意見調查，了解各會員的意見。

**提升專業地位** - 本會成功舉辦市區重建策略(URS)諮詢討論會，協助制定發展方向。討論會由我們的創會會長陳文偉博士主持，並得到會員的積極支持及參與，本會將繼續發揮專業，貢獻社會。



## President's Note on the Urban Renewal Strategy

Dear Members,

To recap, the Development Bureau of the Hong Kong SAR Government had invited our institute to participate in the Review of the Urban Renewal Strategy. Not only have we accepted the invitation, we also encouraged members at large to offer their views via email and / or the forum which took place on January 13.

We have also formed a taskforce, now chaired by our past President Mr. Frankie So, to focus on the matter and it is very likely a professional paper would be produced for reference by the authority. Hence, members who would like to offer their thoughts, ideas, and / or views on urban renewal are highly encouraged to contact us ASAP at:

Phone (852)25370456

Fax (852)25374426

Email [President@hkifm.org.hk](mailto:President@hkifm.org.hk) [please write "URS" on the email heading]

Thanks to all, especially the taskforce members, for the effort to-date. I would also like to take this opportunity to wish each and every member a Happy Lunar New Year.

Regards,  
Stephen Chung  
President

### 會長的話

各位會員，

就香港特別行政區發展局邀請本會參與市區重建策略檢討，本會鼓勵各會員以電郵遞交您的意見或出席1月13日舉行的討論會。

我們亦成立了工作小組，並由上屆會長蘇先生領導，如各會員想就此題目發表意見，請盡快以下列方式聯絡我們：

電話：(852)25370456

傳真：(852)25374426

電郵：President@hkifm.org.hk [標題請註明"URS"]

感謝大家，特別是工作小組各成員的努力。  
在此祝願各位新年快樂。

鍾維傑  
會長  
設施管理學會



## Task Force on Carbon Audit of Buildings

### Funding to Support Buildings Energy Efficiency Funding Schemes

#### FRAMEWORK

##### (A) Energy-cum-carbon Audit Projects

The objective of the scheme is to encourage building owners to carry out energy-cum-carbon audits, with a view to systematically reviewing the use of energy and quantifying the GHG emissions associated with their buildings, and to identify opportunities for enhancements of energy efficiency and conservation and reductions in the level of GHG emissions arising from building operations.

Owners' corporations, owners' organizations or residents' organizations of commercial, industrial and residential buildings are eligible to apply.

Successful applicants are required to submit energy-cum-carbon audit reports, which should include recommendations or programmes to improve GHG emission and energy efficiency and conservation of the buildings.

Funds will be granted on a matching basis. The funding support will only cover expenditures on procurement of service to be used in the project.

The applications will be submitted to the Energy Conservation Projects Vetting Subcommittee set up under the ECF Committee for endorsement.

##### (B) Energy Efficiency Projects

The objective of the scheme is to encourage building owners to carry out alteration, addition or improvement works to upgrade the energy efficiency performance of building services installations.

Owners' corporations of commercial, industrial and residential buildings are eligible to apply.

The building services installations covered under the project shall comply with or be more energy-efficient than the relevant energy efficiency standards stipulated in the respective Building Energy Codes (2007 edition) issued by the EMSD upon completion of the project.

Funds will be granted on a matching basis. The funding support will only cover expenditures on procurement, delivery or installation of the building services installations under the project.

The vetting mechanism and criteria would be similar to that for energy-cum-carbon audit projects. Priority will be given to buildings that have conducted energy or carbon audits or the energy-cum-carbon audits.

#### DURATION OF THE FUNDING SCHEMES

Application will be opened for applications for three years or until the allocated \$450 million is fully utilized, whichever is the earlier.

#### WAY FORWARD

The two funding schemes are planned to be launched in the first quarter of 2009.



## 樓宇碳審計工作小組

## 樓宇能源效益資助計劃

架構

### (A) 能源及碳審計項目

此計劃鼓勵樓宇擁有人參與能源及碳審計，檢討能源運用和量化溫室氣體排放量，以便制定能源效益方案及減低溫室氣體排放。

各成功申請者需提交能源及碳審計報告，包括能源效益及改善溫室氣體排放建議。

基金將資助項目採購成本。所有申請由環境及自然保育基金委員會轄下節能項目審批小組負責審批。

### (B) 節能項目

此計劃鼓勵樓宇擁有人進行各項改善工程以提升樓宇節能表現。

基金將資助項目採購、運送及安裝成本。

審批機制與能源及碳審計項目類同，而樓宇參與能源 / 碳審計或能源及碳審計則獲優先考慮。

資助計劃期限

由計劃展開的三年內均接受申請，或四億五千萬撥款全部批出為止。

未來路向

以上兩項資助計劃將於2009年第一季推出。

## CPD Talk Series

CPD Event "Lift and Escalator Safety"

Speaker: Dr Albert SO



For discussion  
on 18 November 2008

Paper No. 01/08

## **Task Force on Carbon Audit of Buildings**

### **Activities to Promote the Carbon Audit Guidelines for Buildings in Hong Kong<sup>1</sup>**

#### **Purposes**

Members are invited to:-

- (a) consider and discuss the proposed activities outline plan at paragraphs 5 - 14;
- (b) suggest other initiatives to promote the level of community acceptance and usage of the Carbon Audit Guidelines for Buildings in Hong Kong (the Guidelines).

#### **Background**

2. To assist the users and managers of buildings to improve their awareness of greenhouse gas (GHG) emissions, measure their GHG emission performance and actively participate in actions to combat climate change, the Government launched on 24 July 2008 the first carbon audit guidelines for conducting carbon audits on buildings. A “Green Hong Kong • Carbon Audit” campaign was also launched on the same day to encourage participation of different sectors of the community. At present, around 40 organisations from property development and management sectors, professional bodies, universities, hospitals, airports, ports and terminals, etc. have become our “Carbon Audit • Green Partners”.

3. On 15 October this year, the Chief Executive, in the latest Policy Address, announced additional initiatives to improve energy efficiency and

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<sup>1</sup> The Carbon Audit Guidelines for Buildings in Hong Kong means the “Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings of Commercial, Residential or Institutional Purpose in Hong Kong” published by the Environmental Protection Department and Electrical and Mechanical Services Department of the HKSAR Government.

GHG performance, e.g., by setting aside \$450 million dollars in our Environment and Conservation Fund (ECF) to subsidise building owners to conduct energy-cum-carbon audits and energy efficiency projects. In the 2008-09 Policy Agenda, the Administration also undertakes to engage the business sector to conduct carbon audit for over 100 buildings in 2009.

### **The Need for Promotional and Educational Activities**

4. Carbon audit is a relatively new concept to the local community. The Guidelines are still considered as a set of new and evolving tools to help the public and private sectors manage their GHG performance. Therefore, it is necessary to draw up plans and carry out “publicity” activities to help different levels of the management to familiarise with the concept and practices of “carbon audit”, and mobilize them in carrying out audits and subsequent carbon reduction measures. It is also necessary to raise public awareness on carbon audit practices on buildings, demonstrate its usefulness and share the experiences of this area with the community. In addition, the public education and publicity activities could improve the understanding on the proposed schemes under the ECF (cf para 3, which partially subsidise building owners to conduct energy-cum-carbon audits), and facilitate participation in the schemes.

### **Activity Outline Plan**

5. In considering drawing up a future activity plan for promoting the Guidelines, it is **suggested** that efforts should initially be focused on the Government and buildings and property management sectors. The former has an important role in leading the community to transit into a low-carbon economy, and both have been managing most of the building stocks in Hong Kong. It is also **suggested** that professional bodies which possessed critical technical knowledge on the operations of buildings or carbon reduction measures should be engaged in these activities.

### ***Government Sector***

6. In the launching of the Carbon Audit Guidelines in July 2008, it was announced that the Government would carry out carbon audit at around 20 government buildings in year 2008-09. To facilitate wider adoption of the Guidelines and to promote carbon audit practices, it is **proposed** that a series of

briefings and seminars should be carried out to raise awareness of relevant staff on the subject in the coming year.

7. It is also **proposed** that departments which manage significant number of buildings (e.g. Government Property Agency and Housing Department) should be encouraged to draw up carbon audit plan (e.g. with timetable) and to adopt carbon audit practices. These departments would also be encouraged to consider how to share their carbon audit experiences and subsequent reduction efforts in mapping out the plan. The Electrical and Mechanical Services Department (EMSD) and the Environmental Protection Department (EPD) will have separate discussion with these departments to facilitate their drawing up the plan as well as to agree on the number of buildings that should be subject to carbon audit in each year.

#### *Property Developers and Buildings Management Sector*

8. At present, about 10 property developers and their associated property management companies are already our “Carbon Audit • Green Partners”. These organizations are our important partners in promoting carbon audit practices at buildings. The partner developers have demonstrated a great deal of commitment and enthusiasm in the Campaign, and have called upon their subsidiary property management companies to take action. The latter are professional in identifying room for GHG improvement at their respective buildings, help saving energy costs and reducing carbon footprints. We therefore **suggest** to continue to reach out and engage more property developers, as well as the Hong Kong Association of Property Management Companies Limited, the Hong Kong Institute of Facility Management, and other members of the Real Estate Developers Association of Hong Kong, with a view to further promoting wider adoption of the Guidelines within their members. Internal publications, seminars and workshops could be organized to reach out and encourage more property management companies to join our “Green Hong Kong • Carbon Audit” campaign. Opportunity will be taken for early users of the Guidelines to share their experiences with their peers, which may then help overcome any confidence barrier.

9. We are aware that property managers and facilities managers usually act on behalf of owners of their relevant buildings. It is therefore also important to raise the awareness of buildings owners’ incorporations (OICs)

about Guidelines (as well as the need for carbon reduction efforts). It is **proposed** that out-reach programmes (e.g. road-shows, seminars, distribution of posters and leaflets) with the assistance of Home Affairs Department (and possibly district councils) should be planned to engage the OICs. Professional bodies and our “Carbon Audit • Green Partners” could be invited to join such activities.

10. In order to recognize the carbon reduction efforts from the private sector, the Chief Executive proposed in the latest Policy Agenda to extend the Hong Kong Awards for Environmental Excellence (HKAEE) to cover this aspect. We will therefore **suggest** that the efforts to conduct carbon auditing and carbon reduction by property developers, property management companies and facility managers should be suitably recognized in the extended HKAEE. In this connection, the EPD will work closely with the Hong Kong Productivity Council to draw up a proposal.

11. Professionals from various engineering disciplines are important partners of property managers in conducting carbon auditing and in carrying out carbon reduction measures. Their connections with overseas counterparts will also be useful in bringing home the latest international development and technology. It is therefore **suggested** that professional bodies and organisations with relevant technical know-how should be encouraged to work hand in hand with property management companies / OICs to conduct educational and publicity programmes on carbon auditing and carbon reduction (e.g. via publications, seminars, workshops and training classes, etc).

#### *Raising General Community Awareness*

12. As Carbon Audit is a relatively new concept, more efforts should be made to introduce the idea to the general public. EPD is currently maintaining a website on this subject. “Carbon Audit • Green Partners” have been encouraged to share their experiences in carbon auditing and carbon reduction activities at this website. To further publicise “carbon auditing” and carbon reduction measures, we **propose** to make use of the mass media (e.g. radio programmes, news articles etc) and organize community / educational activities to sustain public interest.

13. In addition, we believe trade associations and Chambers of Commerce

will be able to play a very useful role to help their members understand the practices, e.g. through internal publications, and organising seminars/workshops for members. Recognising that the Hong Kong General Chamber of Commerce (the Chamber) is the largest business association in Hong Kong, and that it has indicated interest in working with the Government on this area; we **suggest** to work hand in hand with the Chamber on a series of promotional activities to promote carbon audit practices to and share experiences with its members.

### **Way Forward**

14. Subject to comments and suggestions from Members, EPD and EMSD will work out the details of the suggested plan, with perhaps input from relevant Members.

### **Advice Sought**

15. Members are invited to note and give comments on the suggested activity outline plan in paragraphs 5-14.

Environment Protection Department  
November 2008

# Carbon Audit Guidelines of Buildings

1

## Application of the Guidelines

Assist the users and managers of buildings to

- account for and to report on the GHG emissions arising from the buildings;
- identify areas of improvement; and
- actively participate in voluntary programmes to reduce and/or offset their emissions

under the principle of voluntary participation and self-reporting.

2

## Reference

- **Make reference to international protocols and standards:**
  - **World Resources Institute’s “The Greenhouse Gas Protocol” (March 2004)**
  - **ISO 14064-1(2006)**

3

## Applicability

- **Commercial ✓**
  - **Offices, Retails, Restaurants, Hostels, Hotels**
- **Residential ✓**
- **Institutional ✓**
  - **Schools, Universities, Community Centres, Sports Complexes**
- **Industrial ✗**

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## Steps for Preparing the Report

1. to determine the physical boundaries;
2. to determine the operational boundaries;
3. to determine the reporting period;
4. to collect necessary data and information and to quantify the GHG performance; and
5. to prepare the report

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## Operational Boundaries

- Scope 1 – Direct emissions and removals
- Scope 2 – Energy indirect emissions
- Scope 3 – Other indirect emissions

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## Scope 1 (Direct emissions and removals)

- **Stationary fuel combustion**
  - E.g. electricity generators, boilers, gas cookers, etc.
- **Mobile fuel combustion**
  - E.g. shuttle bus services
- **Fugitive sources**
  - E.g. leakage from refrigeration system
- **Removal by sinks**
  - E.g. additionally planted trees

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## Scope 2 (Energy indirect emissions)

- **Electricity purchased from power companies**
- **Towngas purchased from gas companies**

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## Example (II)

Table F: GHG Emissions from Electricity Purchased from Power Companies

Step 1 A	Step 2 B	Step 3 C Note		Step 4 D
Facility / source description (i.e. Area / facilities the electricity bill is reporting)	Amount of electricity purchased (in kWh)	Emission factor (kg / kWh)		Indirect GHG emissions in tonnes of CO <sub>2</sub> equivalent (B x C / 1000)
		Power company-specific	Territory-wide default value	
<b>Total</b>				

Please insert more rows as necessary

Note: The reporting entity is required to account for GHG emissions associated with the electricity purchased in Hong Kong based on two emission factors. First, the reporting entity will quantify the emissions based on a territory-wide default value of 0.7kg / kWh. Second, the reporting entity will quantify the emissions based on specific emission factors provided by its respective provider of electricity. In case that the specific emission factor for the reporting period is not available at the time of accounting, the latest specific emission factor from the power company may be used as an approximation. These specific emission factors are available from the power companies' websites. For reference, the table below indicates the emission factors of the two power companies in Hong Kong for the past 6 years.

GHG Emission Factor for Different Power Companies in Hong Kong (in kg CO<sub>2</sub>e / kWh)

Power company	2002	2003	2004	2005	2006	2007
CLP*	0.48	0.56	0.53	0.52	0.53	0.57
HEC*	0.96	0.98	0.98	0.92	0.91	0.82

\* Emission factors for CLP were derived from information in CLP Holdings' Annual Report and CLP's Key Performance Statistics.

\* Emission factors for HEC were derived from information in HEC's Environment, Quality, Health and Safety Report and HEC's website.

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## Green Hong Kong • Carbon Audit Campaign

- Launch Guidelines on 24 July 2008
- Launch a “Green Hong Kong • Carbon Audit” Website
- Over 100 Government and private buildings to conduct carbon audit
- Some 40 organizations from sectors below becoming “Carbon Audit • Green Partners” :
  - Property development and management
  - Professional bodies
  - Universities
  - Hospitals
  - Non-profit organizations
  - Other commercial sectors

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## Carbon Audit • Green Partners

- **Organizations that have signed the “Carbon Reduction Charter” to become “Carbon Audit • Green Partners” have undertaken to:**
  - **conduct or assist in conducting carbon audits on their buildings**
  - **formulate implementation plans to promote and support the reduction of the overall GHG emissions from buildings**
  - **work in partnership with all the stakeholders in the community to promote best practices and behavioral changes to reduce GHG emissions**

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## Carbon Audit • Green Partners (42 to date, 3 under review)

- BEAM Society
- Business Environment Council
- Cathay Pacific Airways Ltd
- Cheung Kong (Holdings) Ltd
- City University of Hong Kong
- Climate Change Business Forum
- CLP Power Hong Kong Ltd
- Energy Institute - Hong Kong Branch
- Faculty of Engineering, The University of Hong Kong
- Fuji Xerox (Hong Kong) Ltd
- Hallmark Cards (HK) Ltd
- Hang Seng Bank
- Henderson Land Development Co. Ltd
- Hong Kong Association of Energy Engineers
- Hong Kong Electric Co. Ltd
- Hong Kong Housing Society
- Hong Kong Institute of Education
- Hong Kong International Airport
- Hong Kong International Terminals
- Hong Kong Productivity Council
- Hong Kong Science and Technology Parks Corporation
- Hospital Authority – Kwong Wah Hospital and TWGHs Wong Tai Sin Hospital
- HSBC
- Langham Place, Mongkok, Hong Kong
- Ming Pao
- New World Development Company Ltd
- Sino Group
- Sun Hung Kai Properties Ltd
- Swire Pacific Ltd
- Swire Properties Ltd
- The Chinese University of Hong Kong
- The Climate Group
- The Hong Kong and China Gas Company Ltd
- The Hong Kong Association of Property Management Companies Limited
- The Hong Kong Institute of Architects
- The Hong Kong Institute of Facility Management
- The Hong Kong Institution of Engineers
- The Hong Kong Polytechnic University
- The Link Management Ltd
- The Open University of Hong Kong
- The University of Hong Kong Estates Office
- World Resources Institute

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**Thank you!**

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