



可持續發展委員會
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COUNCIL FOR SUSTAINABLE DEVELOPMENT

Report on the Public Engagement Process

on

"Combating Climate Change: Energy Saving and Carbon Emission Reduction in Buildings"

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Table of Contents

	Page
1. Executive Summary	1
2. Introduction and Background	8
3. Report on the Public Engagement	11
- <i>Public Engagement Process</i>	
- <i>Public Education and Awareness Programme</i>	
4. SDC Recommendations	16
5. Closing Remarks	29

Annex I List of Engagement Events

Annex II List of Supporting Organisations

1. Executive Summary

1.1 Climate change is one of the major sustainability challenges that needs our attention and actions immediately. Many countries and cities have actively put in place mitigation and adaptation measures in recent years with the aim to combating climate change and alleviating its associated impacts on societies. Hong Kong as a world class metropolitan city is also committed to reducing its carbon footprint. In the last quarter of 2010, the Government consulted the public on a proposed overall target to reduce Hong Kong's carbon intensity by 50%-60% in 2020 as compared with the 2005 level.

1.2 In order to focus the issue from the demand side management perspective, the Council for Sustainable Development (SDC) launched a public engagement (PE) process on "Combating Climate Change: Energy Saving and Carbon Emission Reduction in Buildings" in August 2011, and put forward eleven action areas under two general categories, namely, "Systemic Enhancement" and "Facilitation of Behaviour Change" to engage the community. The SDC commissioned Kadoorie Institute of The University of Hong Kong to act as the Programme Director to design, manage and execute the overall PE process to gauge the views of the community and various stakeholders on possible incentives, concerns, barriers and potential action plans on demand-side management of electricity consumption as part of the broader effort for combating climate change.

1.3 During the PE process, about 1 300 stakeholders and members of the public participated in 28 engagement events (including five regional public forums) organised by the SDC and its supporting organisations, while a public education and publicity programme was also carried out in parallel with the support of collaborating schools, non-governmental organisations (NGOs) and other organisations.

1.4 During the PE process, submissions were received from different channels, including mails, emails, facsimile, views collection forms, SDC's on-line discussion forum and the Public Affairs Forum of Home Affairs Bureau. Based on these channels, written returns were received from over 40 organisations and some 1700 individuals which expressed views on the different issues that were generally covered in the Invitation for Response (IR) document. There were also some 4 560 returns which are broadly identical and related to one single issue in the IR document. In addition, there was 150 media coverage on PE-related matters. All the views collected were recorded and analysed by the Office of Service Learning, Lingnan University, the Independent Analysis and Reporting Agency (IRA). The IRA's final report and analysis on the views collected is available at <http://www.susdev.org.hk/en/home.aspx>.

1.5 With reference to the IRA's report, the SDC reflects the public and stakeholders' views on the issues, challenges and possible way forward for enhancing the existing measures/regulatory requirements and instigating behaviour and lifestyle changes. It follows that the process involves active and informed discussions where different perspective of views, concerns on applicability/practicability in the Hong Kong context, issues of costs and effectiveness, impacts on the public and stakeholders etc. are fully examined. The process was in fact sustainable development in action: involving the balancing of environmental, social and economic considerations.

1.6 The PE exercise has revealed a call from the public for the Government to taking the lead in practicing energy saving, improving energy efficiency and enhancing education and publicity programmes for showcasing the benefits, financial or otherwise, of reducing carbon emissions. The SDC also recognizes that the key messages of this PE are the need for different sectors in the community to work together to help reduce carbon emission. The efforts and initiatives in energy efficiency would only be truly sustainable with concerted efforts of the Government, stakeholders and the community in making behaviour change. The public sentiment and relevant considerations provide the basis and general directions for the SDC to take into account in formulating recommendations for the Government and other sectors of the community on the potential action areas. The specific recommendations put forward by the SDC are as follows:

Potential Action Areas	Recommendations	Reference in SDC Report
Systemic Enhancement		
<i>To Consider Tightening The Building Energy Code (BEC)</i>	In order to enhance the energy efficiency performance in buildings, the Government should continuously tighten the statutory minimum energy efficiency standards for major building services installations as provided under the BEC with reference to latest international standards.	4.7(i)
	The Government should periodically review and enhance the BEC to align with advancement of relevant technology.	4.7(ii)
<i>To Consider Providing Recognition For Buildings Achieving High Energy Efficiency</i>	The Government should work more closely with the professional bodies concerned to further promote green buildings with reference to overseas experience.	4.9(i)
	The use of BEAM Plus for Existing Buildings promulgated by the Hong Kong Green Building Council should be promoted to facilitate more retrofitting projects in existing buildings to undertake assessment on green building performance.	4.9(ii)
	The use of rating/certification system should be promoted, e.g. through the development of online building energy performance benchmarking tool, to distinguish and recognize green buildings.	4.9(iii)
	The Government should use the energy data collected through the mandatory energy audit as required under the Buildings Energy Efficiency Ordinance to build up a database which could help establish a benchmark for building operators/occupiers to make reference to in identifying improvement potential among buildings of similar operation and physical characteristics.	4.9(iv)
	The Government should review the effectiveness of the existing Gross Floor Area (GFA) concession arrangement in the light of the experience gained after a reasonable number of projects have been completed, and consider whether it is necessary to tighten the	4.10(i)

Potential Action Areas	Recommendations	Reference in SDC Report
	requirement e.g. by imposing a minimum classification of Bronze rating under the BEAM Plus for new building development to be eligible for GFA concession.	
<i>To Explore Extension Of The Application Of The Mandatory Energy Efficiency Labelling Scheme (MEELS)</i>	The Government should conduct continuous review to cover more appliances under MEELS. When identifying additional types of electrical appliances for mandatory labelling under the MEELS, the Government should take into account such relevant considerations as technical factors, e.g. assessment of the energy consumption and potential energy saving of the appliances; and education and awareness-raising purpose, e.g. covering appliances that are widely used.	4.13(i)
	The Government should step up publicity and education on the MEELS to enable consumers in general to have better access to energy saving information and make informed choices of energy-efficient appliances.	4.14(i)
<i>To Consider Updating and Reviewing The Energy Efficiency Grading Levels For Room Air Conditioners And Refrigerators Under The MEELS</i>	The Government should periodically review and update the grading standard of the room air conditioners and refrigerators under the MEELS with reference to the latest international advancement in technology.	4.15(i)
<i>To Explore The Way Forward of Phasing Out Energy-Inefficient Incandescent Light Bulbs (ILBs)</i>	The Government should take into account public's views gathered during the SDC's public engagement process and its own public consultation on phasing out energy-inefficient ILBs in deciding on the best way to take the proposal forward.	4.18(i)
<i>To Promote Green Procurement and The Use of Energy-efficient Electrical Installations Appliances</i>	The Government should take the lead in procuring and using energy-efficient appliances and set good examples in showcasing the electricity/cost saving in using such appliances.	4.19(i)
Facilitation of Behaviour Change		
<i>Energy/Carbon Audit</i>	The Government should take the lead to conduct carbon audit in public facilities to showcase the benefits of conducting carbon audit. The Government should start collecting data for conducting carbon audit with a view to publishing the audit results in one to three	4.21(i)

Potential Action Areas	Recommendations	Reference in SDC Report
	years' time, depending on the scale of operation of the facilities.	
	The Housing Authority should conduct carbon audit for the common areas of public rental housing blocks to demonstrate potential electricity and cost savings. Premises under the home ownership scheme should also be encouraged to follow suit.	4.21(ii)
	Major subvented public bodies (e.g. universities and hospitals) should also actively consider conducting carbon audit.	4.21(iii)
	The Hong Kong Stock Exchange should explore how their on-going initiatives on Environmental, Social and Governance (ESG) could incorporate conduct of carbon audit and/or undertaking of environmental or sustainability reporting with a view to driving for the best practice requirement for listed companies.	4.23(i)
	The Government should encourage carbon audit among general businesses and SMEs should also be more incentivized to do energy audit as the results of energy audits are conducive to reducing electricity costs.	4.23(ii)
<i>Better Understanding of Your Energy Consumption</i>	The two power companies should explore means to enhance the public's understanding of their own electricity consumption patterns through informative and user-friendly electricity bills in both paper-based and electronic format.	4.27(i)
	The two power companies should consider the provision of relevant information, such as electricity consumption per capita in Hong Kong or per floor area, and carbon emission per unit of consumption, to facilitate the public in better understanding their relative performance in energy consumption.	4.27(ii)
<i>More Use of Building Energy Efficiency Management Systems</i>	The Government should further promote the use of building energy efficiency management systems.	4.28(i)

Potential Action Areas	Recommendations	Reference in SDC Report
	The Government should serve as a role model to showcase building energy efficiency management systems in achieving better energy performance for the private sector.	4.28(ii)
	Facilitation programmes should be organised to enhance the visibility of building energy efficiency management systems in the market to encourage the use of such systems. Such programmes should highlight the importance and benefits of incorporating the building energy efficiency management systems during the planning and design stage of building construction.	4.28(iii)
	The Government should explore more energy efficiency measures to reduce electricity use in air conditioning, e.g. guidelines on indoor temperatures control, setting a higher temperature in computer server rooms, data centres, etc. Such measures should be promulgated to the private sector to drive for improved energy efficiency in the use of air conditioning.	4.29(i)
<i>Promote Adoption of Energy-Efficient Electrical Appliances among The Trades</i>	The Government should further promote local research and development of energy-efficient electrical appliances.	4.31(i)
	The Government should further enhance the accessibility to information on energy-efficient appliances with a view to enhancing the awareness of such appliances among the public and the trades.	4.31(ii)
	The Government should encourage green investments on research and development for energy-efficient appliances through various funding schemes.	4.31(iii)
<i>Electricity Tariff Structure Review</i>	The Government and the power companies should further review the tariff structure with a view to promoting energy conservation. More study and discussion is required to agree on the objectives to be achieved, and all relevant considerations should be taken into account in the upcoming 2013 tariff review.	4.34(i)

Potential Action Areas	Recommendations	Reference in SDC Report
	In the meantime, the power companies should continue to enhance existing programmes to support energy saving and efficiency among end-users.	4.35(i)
<i>Other Issues</i>	<p>The Government should launch more intensive public education and awareness programmes to widen and deepen the general awareness of the public about the relevance of climate change to the community –</p> <ul style="list-style-type: none"> • on the commercial side, more educational work targeted at SMEs should be pursued; and • as for the general public, consideration should be given to launching a territory-wide campaign to encourage energy conservation to instigate behaviour change in the community. 	4.36(i)
	The Government should continue to look into the matter of external lighting taking into account all relevant considerations.	4.37(i)

2. Introduction and Background

2.1 In recent years, the issue of climate change has been in the forefront of the sustainable development agenda of many nations and cities as well as on the international agenda for cooperation. In the last quarter of 2010, the Government conducted a public consultation to gauge the views of the community and various stakeholders on **Hong Kong's climate change strategy and action agenda for the coming decade**. The public consultation document proposed a target of **reducing Hong Kong's carbon intensity in 2020 by 50%-60% compared to the 2005 figure**. The consultation document also proposed broad policy strategies on how Hong Kong as a whole could mitigate and adapt to the impacts of climate change, with emphasis on both supply-side strategy, such as fuel mix; as well as demand-side measures including directions on maximizing energy efficiency, greening road transport, promoting the use of clean fuels for motor vehicles and turning waste into energy etc. In March 2011, **the Fukushima nuclear plant incident** triggered global introspective thoughts on pursuing nuclear power as one of the major energy sources. It also reminded us the importance of using and managing the **demand-side** of limited and increasingly expensive energy resources as effectively as possible.

2.2 In view of this, the Council for Sustainable Development (SDC) launched a new round of public engagement (PE) process in August 2011, with the publication of an Invitation for Response (**IR**) **document** entitled **“Combating Climate Change: Energy Saving and Carbon Emission Reduction in Buildings”**, to gauge the views of the community and stakeholders on **possible incentives, concerns, barriers and potential action plans on demand-side management of electricity consumption** for combating climate change.

2.3 In terms of Hong Kong's greenhouse gas (GHG) emissions, electricity generation accounted for about 67% of our total emissions in 2008. Close to 90% of our city's electricity is consumed in buildings. In other words, electricity consumed by buildings contributes to about 60% of Hong Kong's GHG emissions. Of the total electricity consumption in buildings as at 2008, residential premises accounted for about 25% while commercial buildings took about 65%. It follows that targeting major building user groups, including **household, office, retail and catering sectors**, would represent a major step towards territory-wide reduction in electricity consumption and carbon emission.

2.4 The SDC adopted a bottom-up approach to engage building users to work together to **maximise energy efficiency and minimise carbon emission in buildings**. In line with previous engagement exercises, a Support Group (SG) has been formed to support the SDC in providing professional and

expert advice on formulating a more defined scope of the PE and in the compilation of the IR document. **Three SG meetings** and **four small group meetings / joint sessions** were held between January and April 2011 to better harness the professional knowledge and expertise of the members of the SDC, its Strategy Subcommittee and the SG at the early planning stage.

2.5 **Five focus group meetings (FGMs)** were also conducted with the target building user groups (i.e. household, office, retail and catering) and relevant stakeholders in April and May 2011 to solicit their specific views and concerns over building energy efficiency in the operation of the four building user groups. These FGMs were designed to facilitate in-depth discussion and meaningful dialogue between stakeholders for framing the issues in the IR document which served as the major resource to impart information and encourage public deliberation. Nearly **60 stakeholders** have participated in the FGMs and contributed their thoughts and suggestions to the discussion. This is of particular importance in this PE process as the issues to be put forward by the SDC for inclusion in the IR document should be **technically feasible, practical to implement** and compatible with the **socio-economic contexts** of Hong Kong.



FGM - Retail



FGM - Office



FGM - Household



FGM - Catering



FGM - Professional Organisations
and Green Groups

2.6 Based on the general background research and case studies, as well as views collected from the meetings outlined above, a total of 11 possible action areas have been put forward in the IR document which are categorised under “**Systemic Enhancement**” and “**Facilitation of Behaviour Change**” as follows for soliciting public views:



The IR document

Systemic Enhancement –

- (i) To consider tightening the Building Energy Code;
- (ii) To consider providing recognition for buildings achieving high energy efficiency;
- (iii) To explore extension of the application of the Mandatory Energy Efficiency Labelling Scheme (MEELS);
- (iv) To consider tightening up the energy efficiency grading levels for room air conditioners and refrigerators under the MEELS;
- (v) To explore phasing out energy-inefficient incandescent light bulbs; and
- (vi) To explore phasing out energy-inefficient electrical installations/appliances.

Facilitation of Behaviour Change –

- (i) Energy/Carbon audit;
- (ii) Better understanding of your energy consumption;
- (iii) More use of energy efficiency management systems;
- (iv) Promote adoption of energy-efficient electrical appliances among the trades; and
- (v) Electricity tariff structure review.

2.7 In support of the SDC’s public engagement process, the SDC and its Education and Publicity Sub-Committee (EPSC) also launched a **public education and awareness programme** as a co-ordinated effort to widen and deepen the general awareness of the community on climate change and drive behaviour change in adopting low carbon lifestyle (please see paragraphs 3.9 to 3.10 for more details).

3. Report on the Public Engagement

Public Engagement Process

3.1 This PE on “Combating Climate Change: Energy Saving and Carbon Emission Reduction in Buildings” is the **fifth round** of PE process undertaken by the SDC. Its public involvement (views collection) phase ran for **four months** from 5 August to 4 December 2011. A **press conference** was held on 5 August 2011 marking the formal launch of the PE process.

3.2 Overall, a total of **28 engagement events** (including five regional forums across the territory) (full list at **Annex I**) were rolled out in the public involvement phase. Around **1 300 members of the public and stakeholders** took part in the above-mentioned events. These engagement events also include a series of **engagement meetings** held with public advisory bodies, professional organisations, Legislative Council members, District Councilors and other key stakeholders to gauge their views on the proposed action areas set out in the IR document, as well as other issues of interest related to the PE.



Press conference hosted by the SDC Chairman and the SG Convenor

3.3 With the support of **67 supporting organisations** (full list at **Annex II**), including tertiary institutes, public authorities, research institutions, think tanks, green groups, non-government organisations (NGOs), chambers of commerce, business organisations and professional organisations, information about the PE was disseminated in an effective and efficient manner through their network. They also facilitated the SDC in views collection and exchange of ideas within their organisations in the format of various **briefings, seminars, talks, discussion forums and distribution of views collection forms**. The **Hong Kong Productivity Council** has also been engaged to launch an online carbon management tool, entitled the “**Carbon Manager**” in late September 2011, which is a free web-based carbon management tool for household, retail, catering and other building user groups (such as schools and commercial premises etc.) for helping them pursue energy saving and carbon reduction measures, as well as raising the public awareness on carbon reduction in general.



1st Regional Forum –
New Territories East



2nd Regional Forum –
Kowloon West cum Launch of
Carbon Manager



3rd Regional Forum –
Hong Kong Island



4th Regional Forum –
New Territories West



5th Regional Forum –
Kowloon East

3.4 A **dedicated PE website** was launched to provide interactive “infotainment”, including –

- Online versions of the IR document and views collection form;
- Discussion forum to collect responses on different topics of the PE;
- Interactive games and quiz (i.e. “How to Save Energy” and “Sustainable Man”) to attract youngsters’ attention;
- A knowledge portal for climate change related issues, e.g. greenhouse gas emission level in Hong Kong, existing government measures and regulations to maximize energy efficiency in buildings and achieve carbon emission reduction, concepts and guidelines on energy / carbon auditing etc.;
- A photo gallery of PE activities;
- Low carbon tips / reminders about how energy can be saved at home and workplaces; and
- A hyperlink to the "Carbon Manager", a user-friendly online carbon emission calculation system developed by the Hong Kong Productivity Council under the SDC’s commission.



“Carbon Manager” tool



How to Save Energy



Sustainable Man

Online games

3.5 The SDC also promoted the PE through the mass media to effectively reach out to the wider community, and highlight how climate change is closely related to our daily lives to drive for behaviour change. The publicity items included **TV and Radio Announcements in the Public Interests, media interviews, a series of radio programmes and segments, and broadcast of short promotional videos on RoadShow**, etc. There were about 150 media reports covering PE-related matters.

3.6 Following the successful completion of the four-month public involvement phase, views were collected at regional forums and engagement events, and written submissions were also received from over 40 organisations, some 1 700 individuals, and also some 4 560 returns which were broadly identical and related to one single issue in the IR document. The Office of Service-Learning of the Lingnan University, which is the IRA for this PE process, collated and analysed all the views independently and presented a report to the SDC on the findings of the public sentiment towards climate change and ways of combating it in Hong Kong. Taking account of these findings, the SDC formulated specific recommendations to be submitted to the Government for consideration. In a nutshell, the public generally agree with a **holistic and systematic approach in formulating measures to combat climate change, refining existing regulations and standards, and providing support and assistance where appropriate** for promoting energy savings and carbon reduction in buildings. The views also show the public aspirations on how we can further develop Hong Kong into a more **energy-efficient and sustainable low-carbon city** from a **wider perspective**.

3.7 **Chapter 4 of this report** sets out the recommendations of the SDC with a brief account of the SDC's deliberation and the public views based upon which the relevant recommendations are formulated. For details of the qualitative analysis of all the views and submissions, please refer to the IRA's report available at the SDC's website: <http://www.susdev.org.hk/en/home.aspx>.

3.8 This SDC report represents the PE process entering into its final stage. We look forward to the Government's favorable response to this report.

Public Education and Awareness Programme

3.9 To further enhance the public awareness on the importance of combating climate change and its relevance to our daily lives, an intensive public awareness and education programme was conducted in parallel with the PE with the support of collaborating schools, NGOs and other organisations.

3.10 The public education and awareness programme is a year-long programme comprising various activities, e.g. radio programme, school outreach programme, student training programme, broadcast of promotional short videos etc. –

Schools and students

- “Low Carbon Guru Programme” (Go Fun 低碳達人) – 118 students and 27 teachers attended seminars and a three-day training camp organised by WWF – Hong Kong. The students conduct school / community projects under the theme of low carbon living. A Youth Forum would be held for students to share the outstanding school projects;
- RTHK Solar Project 2011 “Love for the Future” (“愛在當下為未來”) with TV broadcast - well-attended by about 700 participants;
- The School Outreach Programme (SOP) - 44 talks and four workshops are offered in 2011/12 school year. Eight stakeholder partners assisted in delivering talks and workshops on climate change and sustainable living to schools.



RTHK Solar Project 2011

General public

- Collaborating with the Hong Kong Arts Centre (HKAC) in producing two one-minute short videos on climate change-related issues: the first video entitled “Letter of Gratitude from the Future” (“未來的感謝信”) was previewed at the RTHK “Solar Project 2011” “Love for the Future” (“愛在當下為未來”) and was broadcast on RoadShow from September to November 2011 to enhance public awareness;
- Collaborating with RTHK and Commercial Radio (CR) to produce a series of radio programmes to enhance public awareness on the

importance of energy saving and carbon emission reduction. For example, useful tips on low-carbon living were promoted in RTHK's "通識 60 秒", and CR's "未來天氣報告" and "低碳預言書", etc. RTHK's DJs also took the initiative in taking energy-saving actions and shared their first-hand experiences with the audience in their programme "尋常事認真做". In addition, RTHK organised a phone-in contest, "節能計中計", for the audience to share their creative and practical ways to save energy in the aspects of clothing, food, housing and transportation. The various radio programmes effectively appealed to and engaged the audiences of different backgrounds to driving for behaviour changes.

4. SDC Recommendations

4.1 The SDC adopts a bottom-up approach in the PE process to gauge the views of the community and various stakeholders on possible incentives, concerns, barriers and potential action plans on demand-side management of electricity consumption as part of the broader efforts for combating climate change.

4.2 The views collected during the PE process were analysed by the IRA. Together with the assistance of the IRA and the advice from the expert SG and the Strategy Sub-committee, the SDC could fully discuss the possible impacts, potential effectiveness and feasibility etc. on all the issues involved, and the process was no less challenging. In the formulation of the recommendations, SDC strives to balance different considerations like desirability and practicality, cost and effectiveness, overseas experience and local contexts etc. with a view to achieving behaviour changes and enhancing energy efficiency for a broader course of combating climate change.

4.3 The PE exercise has revealed **positive response from stakeholders and the general public** on the need to combating climate change through achieving higher energy efficiency and better management of energy use in buildings. It also shows a call from the public for the Government to taking the lead in practicing energy saving, improving energy efficiency and enhancing education and publicity programmes for showcasing the benefits, financial or otherwise, of reducing carbon emissions.

4.4 The public sentiment and aspiration together with various aspects concerning the issues involved have provided the basis for determining the general directions for the SDC to formulate specific recommendations which are set out below (paragraphs 4.5 to 4.37).

Systemic Enhancement

4.5 Buildings Energy Efficiency Ordinance, Energy Efficiency (Labelling of Products) Ordinance and the Building (Energy Efficiency) Regulation are the existing statutory frameworks for the regulation of energy efficiency in buildings. The PE exercise reveals that while individual public members and building users generally have little knowledge on these regulatory measures, the stakeholders (i.e. professionals and practitioners in the field) are in general supportive of the tightening of the Building Energy Code (BEC). On the contrary, most participants have more understanding of the Mandatory Energy Efficiency Labelling Scheme (MEELS) and provided a number of

suggestions on how and what should be included in the MEELS. The SDC's detailed deliberations on each issue are set out below.

To Consider Tightening The Building Energy Code (BEC)

4.6 According to the feedbacks from the PE exercise, the enactment of Buildings Energy Efficiency Ordinance and mandatory compliance with BEC for prescribed buildings are welcomed by the general public. Some practitioners are of the view that there is still room for tightening the minimum energy efficiency standards for major building services installations. The SDC notes that the Government has gazetted the revised edition of BEC in February 2012, in which the energy efficiency standards have been updated and tightened as compared to the 2007 edition.

4.7 Respondents in the PE exercise also consider that periodic review of the BEC should be conducted with a view to enhancing it. Such review exercise should take into account global practices, technological advancement, new data and information etc.. In view of the above, the **SDC RECOMMENDS** that –

- (i) in order to enhance the energy efficiency performance in buildings, the Government should continuously tighten the statutory minimum energy efficiency standards for major building services installations as provided under the BEC with reference to latest international standards; and
- (ii) the Government should periodically review and enhance the BEC to align with advancement of relevant technology.

To Consider Providing Recognition For Buildings Achieving High Energy Efficiency

4.8 There are some views expressed during the PE exercise that recognition should be provided for buildings that achieve high energy efficiency in order to help raise the public's awareness on green buildings. The SDC notes that building energy efficiency forms part of the BEAM Plus certification system promulgated by the Hong Kong Green Building Council (HKGBC) which is devised in the local context with reference to similar overseas systems. There are, however, diverse views on whether the certification system should be managed by the Government. There are also suggestions on the implementation

of collaborative programmes between the Government and NGOs to promote buildings that achieve high energy efficiency. The SDC agrees that a proper rating and recognition system should be supplemented by effective promotion to help publicize and enhance the public's understanding and awareness.

4.9 Taking account of the above and noting that the HKGBC is planning to develop an energy performance benchmarking tool for offices and a building operational energy benchmarking labeling and certification scheme, the **SDC RECOMMENDS** that –

- (i) the Government should work more closely with the professional bodies concerned to further promote green buildings with reference to overseas experience;
- (ii) the use of BEAM Plus for Existing Buildings promulgated by the HKGBC should be promoted to facilitate more retrofitting projects in existing buildings to undertake assessment on green building performance;
- (iii) the use of rating/certification system should be promoted, e.g. through the development of online building energy performance benchmarking tool, to distinguish and recognize green buildings; and
- (iv) the Government should use the energy data collected through the mandatory energy audit as required under the Buildings Energy Efficiency Ordinance to build up a database which could help establish a benchmark for building operators / occupiers to make reference to in identifying improvement potential among buildings of similar operation and physical characteristics.

4.10 The SDC also deliberates on the new arrangement of granting Gross Floor Area (GFA) concessions effective since 1 April 2011. While the measure seeks to motivate developers in incorporating green features for their building projects, SDC notes that among a package of other sustainable building design requirements, a building development registered under BEAM Plus will be eligible for GFA concessions with no minimum requirement on the grading level. As such, the SDC considers there is scope to further review the existing measure, and the **SDC RECOMMENDS** that –

- (i) the Government should review the effectiveness of the existing GFA concession arrangement in the light of the experience gained after a reasonable number of projects have been completed, and

consider whether it is necessary to tighten the requirement e.g. by imposing a minimum classification of Bronze rating under the BEAM Plus for new building development to be eligible for GFA concession.

To Explore Extension Of The Application Of The Mandatory Energy Efficiency Labelling Scheme (MEELS)

4.11 Currently, the MEELS covers five types of products (namely room air conditioners, refrigerating appliances, compact fluorescent lamps, washing machines and dehumidifiers) to facilitate the public in choosing energy efficient appliances and enhance public awareness on energy saving. There is much support in the PE exercise for introducing more household and other office electrical appliances under the MEELS, e.g. high-energy consuming appliances (e.g. water heaters, ovens etc.) and some commonly or daily-used appliances (e.g. television, photocopiers, ventilation fans etc.).

4.12 The SDC notes that proposed extension of the MEELS would need to take account of practical considerations such as the energy consumption and potential energy saving of the appliances, availability of testing laboratories in or near Hong Kong and sales quantity, etc.. On the other hand, the SDC also agrees that the scheme facilitates awareness-raising among consumers and helps contribute to behaviour changes. Hence, the SDC considers that these two key considerations should respectively be taken into account by the Government in considering any new potential appliances for the MEELS.

4.13 In light of the above, the **SDC RECOMMENDS** that –

- (i) the Government should conduct continuous review to cover more appliances under MEELS. When identifying additional types of electrical appliances for mandatory labelling under the MEELS, the Government should take into account such relevant considerations as technical factors, e.g. assessment of the energy consumption and potential energy saving of the appliances; and education and awareness-raising purpose, e.g. covering appliances that are widely used.

4.14 In addition, stakeholders and public also suggest including simple and layman information such as product durability, estimated annual energy saving etc. for the public to make more informed choices of products. The SDC deliberates that more user-friendly information, simple technical specifications

(e.g. through the use of Quick Response Code), tips of smart use can be provided to the public. In view of this, the **SDC RECOMMENDS** that –

- (i) the Government should step up publicity and education on the MEELS to enable consumers in general to have better access to energy saving information and make informed choices of energy-efficient appliances.

To Consider Updating and Reviewing The Energy Efficiency Grading Levels For Room Air Conditioners And Refrigerators Under The MEELS

4.15 Stakeholders consider that since most of the room air-conditioners and refrigerators available in the market are already awarded Grade 1 or 2 under the MEELS, they are generally supportive of tightening the energy efficiency grading level for these two electrical appliances under the scheme. Besides, the SDC notes that while Hong Kong is not a producer/manufacturing-based economy, the trade is moving towards providing more greener and energy-efficient products. Hence, the SDC supports tightening up the current standards of the existing five levels of grading for these two appliances and **RECOMMENDS** that –

- (i) the Government should periodically review and update the grading standard of the room air conditioners and refrigerators under the MEELS with reference to the latest international advancement in technology.

To Explore The Way Forward of Phasing Out Energy-Inefficient Incandescent Light Bulbs

4.16 Public views are diversified in the PE exercise regarding the phasing out of energy-inefficient incandescent light bulbs (ILBs). Some respondents support the implementation of sales restrictions on energy-inefficient incandescent ILBs, and some others considered that ILBs should be phased out by the market force. Relevant issues and concerns are also raised which include the affordability of low-income groups if sales restrictions are imposed on energy-inefficient ILBs; availability of viable alternatives for certain special lighting fixtures; enabling programmes such as disposal arrangement, public education and financial assistance programme etc..

4.17 Following the launch of SDC's public engagement which put forward the restriction of sale of energy-inefficient ILBs as one of the

discussion areas, the Government formally launched a public consultation on the restriction of sale of energy-inefficient ILBs in August 2011. The SDC considers that the Government is taking the right approach to look into this subject, and if the Government decides to legislate against the sale of ILBs, the SDC will support it. The SDC notes that the Government is consolidating views and comments received in response to its public consultation which ended in November 2011.

4.18 In light of these considerations, the **SDC RECOMMENDS** that –

- (i) the Government should take into account public's views gathered during the SDC's public engagement process and its own public consultation on phasing out energy-inefficient ILBs in deciding on the best way to take the proposal forward.

<i>To Promote Green Procurement and The Use of Energy-efficient Electrical Installations/ Appliances</i>
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4.19 Views are divided on the phasing out of energy-inefficient electrical installations/appliances. Some respondents are of the view that energy-inefficient electrical installations/appliances would be gradually phased out by market force. Some express concerns regarding the availability of energy-efficient substitutes and the concern on limitation on consumers' choice in a free market economy. On the other hand, there are public views supporting the phasing out of energy-inefficient electrical installations/appliances with a targeted phase-out period. The SDC takes note of these diverse views expressed and considers that more efforts should be focused on promoting green procurement practices at this stage. In this light, the **SDC RECOMMENDS** that –

- (i) the Government should take the lead in procuring and using energy-efficient appliances and set good examples in showcasing the electricity/cost saving in using such appliances.

Facilitation of Behaviour Change

Energy/Carbon Audit

4.20 On the basis that “what gets measured gets managed”, it is important to calculate our carbon footprint and highlight areas where the energy can be used in a more efficient or less wasteful way. As revealed in the PE process, respondents generally agree that energy/carbon audits¹ were effective ways to identify deficiencies and improve opportunities for implementing appropriate energy saving measures, as part of the broader effort to curb carbon emissions and combat climate change. The public generally believes that carbon auditing helps to provide a baseline against which future performance can be compared, and energy auditing a tool to identify energy improvement opportunities for the implementation of measures that reduce energy consumption, and associated costs and greenhouse gas emissions.

4.21 Given the general perception that energy/carbon audit has not been widely adopted in Hong Kong, many respondents in the PE exercise suggest that the Government should endeavor to serve as a role model to the public and set good examples in practising low-carbon management. In view of this, the **SDC RECOMMENDS** that –

- (i) the Government should take the lead to conduct carbon audit in public facilities to showcase the benefits of conducting carbon audit. The Government should start collecting data for conducting carbon audit with a view to publishing the audit results in one to three years’ time, depending on the scale of operation of the facilities;
- (ii) the Housing Authority should conduct carbon audit for the common areas of public rental housing blocks to demonstrate potential in electricity and cost savings. Premises under the home ownership scheme should also be encouraged to follow suit; and

¹ An energy audit involves the systematic review of the energy consuming equipment/systems in a building to identify energy management opportunities, which provides useful information for the building owner to decide on and implement the energy saving measures for environmental consideration and economic benefits.

Carbon audit refers to a systemic procedure for measuring, evaluating, reporting and verifying greenhouse gases (GHG) emitted directly and indirectly by an entity, such as an organisation, a corporation or a building within a defined system boundary. It provides the reported entity with a baseline indicator to derive a pragmatic approach to reduce GHG emissions and allows evaluation of the effectiveness of the carbon reduction measures and policies introduced, which can lead to potential costs savings.

- (iii) major subvented public bodies (e.g. universities and hospitals) should also actively consider conducting carbon audit.

4.22 Concerns were expressed during the PE exercise over the resource and time implications to some businesses for conducting a comprehensive carbon audit or extensive assessment of their operations. Besides, energy audit was considered effective for small and medium enterprises (SMEs) as it would help bring about reduction in energy consumption and savings in operation costs. While SMEs, which constitute the biggest sector in the market, should be incentivized to conduct energy audit, the SDC considers that incentive should not come in the form of financial pay-out when balancing different interests of the society, but some form of technical assistance may facilitate SMEs to conduct carbon/energy audit.

4.23 As energy consumption in buildings is a major contributor to carbon emissions in Hong Kong and in order to foster an energy/carbon-conscious culture among general businesses and in the society, the SDC further **RECOMMENDS** that –

- (i) the Hong Kong Stock Exchange should explore how their on-going initiatives on Environmental, Social and Governance (ESG) could incorporate conduct of carbon audit and/or undertaking of environmental or sustainability reporting with a view to driving for the best practice requirement for listed companies; and
- (ii) the Government should encourage carbon audit among general businesses and SMEs should also be more incentivized to do energy audit as the results of energy audits are conducive to reducing electricity costs.

4.24 The SDC has discussed further whether polluters-pay principle should be applied to the energy sector, e.g. the introduction of carbon tax for funding energy efficiency/carbon reduction initiatives. The SDC notes that carbon tax involves very complicated issues and may not be an effective means to reduce emission in the local context given that Hong Kong is a service economy with no major energy-intensive industries. It is therefore considered that further study and more public discussion are required.

4.25 Apart from efforts focusing on the corporate level as mentioned above, the SDC is of the view that each member of the community could contribute more to combating climate change, and carbon calculators for carrying out personal carbon audit should be further promoted so that each

member of the public could take decisive action for lowering their carbon footprint and save money.

Better Understanding of Your Energy Consumption

4.26 Understanding how energy is being used is a crucial step towards achieving energy efficiency in buildings. Besides keeping detailed records of our consumption patterns for self-assessment, this can also be done by comparing the energy use data with a relevant peer group. The SDC notes that the power companies are currently providing information on electricity consumption to their customers in different forms. Yet, the PE exercise revealed a clear call from the community for access to more information and such should be provided in electricity bills to forge better understanding and more effective management of our electricity consumption. It is noted that some stakeholders also mentioned about energy saving potentials through the application of smart meters, but the SDC noted that such system was very costly amongst others, and the subject had not been fully deliberated during the public engagement.

4.27 Pursuant to the above discussion, respondents prefer an electricity bill that is simple to read and easy to understand. To recapitulate, some suggestions of the types and presentation style of the information include: average consumption per typical household/square metre; benchmarking with average household size; green tips and slogans, and illustrations of carbon emission levels. In facilitating the above, the SDC **RECOMMENDS** that –

- (i) the two power companies should explore means to enhance the public's understanding of their own electricity consumption patterns through informative and user-friendly electricity bills in both paper-based and electronic format; and
- (ii) the two power companies should consider the provision of relevant information, such as electricity consumption per capita in Hong Kong or per floor area, and carbon emission per unit of consumption, to facilitate the public in better understanding their relative performance in energy consumption.

More Use of Building Energy Efficiency Management Systems

4.28 Stakeholders and the public raise their general support for the wider use of building energy efficiency management systems in buildings. The SDC urges to promote public awareness on the benefits of building energy efficiency management system which is normally understood as a computer-based control system to control and monitor the electrical and mechanical systems, plants and equipment installed in the building. Given that the system can help reduce energy consumption in buildings through the software that optimizes operation of systems, plants and equipment according to the usage patterns, the SDC **RECOMMENDS** that –

- (i) the Government should further promote the use of building energy efficiency management systems;
- (ii) the Government should serve as a role model to showcase building energy efficiency management systems in achieving better energy performance for the private sector; and
- (iii) facilitation programmes should be organised to enhance the visibility of building energy efficiency management systems in the market to encourage the use of such systems. Such programmes should highlight the importance and benefits of incorporating the building energy efficiency management systems during the planning and design stage of building construction.

4.29 Comments on air conditioning were also received during the PE process. While some propose to set a minimum indoor temperature, others consider that it is difficult to set a minimum indoor temperature for all types of air-conditioned space. In response to the above views, the SDC **RECOMMENDS** that –

- (i) the Government should explore more energy efficiency measures to reduce electricity use in air conditioning, e.g. guidelines on indoor temperatures control, setting a higher temperature in computer server rooms, data centres, etc. Such measures should be promulgated to the private sector to drive for improved energy efficiency in the use of air conditioning.

Promote Adoption of Energy-Efficient Electrical Appliances among The Trades

4.30 Positive feedbacks were received from stakeholders on the adoption of energy-efficient electrical appliances. However, stakeholders express concerns on the availability and accessibility of these appliances as well as the provision of related information to facilitating procurement choice. There are also comments that the Government may explore ways to promote the wider use of energy-efficient appliances among the trades. The SDC also deliberated on the scope for exploring the provision of funding by the financial sector for green investment. However, there was reservation for implementing a dedicated Government loan guarantee scheme for green financing.

4.31 In light of the above, the SDC **RECOMMENDS** that –

- (i) the Government should further promote local research and development of energy-efficient electrical appliances;
- (ii) the Government should further enhance the accessibility to information on energy-efficient appliances with a view to enhancing the awareness of such appliances among the public and the trades; and
- (iii) the Government should encourage green investments on research and development for energy-efficient appliances through various funding schemes.

Electricity Tariff Structure Review

4.32 The SDC has taken note of the public discussion in late 2011/early 2012 on the 2012 electricity tariff structure adjustments initiated by the power companies. While the 2012 tariff adjustment may have provided some drive towards energy efficiency, it was noted that many wider issues were taken into account in the compilation of the adjustment package.

4.33 During the public engagement, the public were specifically engaged in the discussion of whether the tariff structure should be reviewed for the purpose of instigating behaviour change for reducing energy consumption and/or maximum demand. There were varied views raised on the subject due to the complexity of the issues involved. The SDC also deliberated on carbon tax, time-of-use tariff and incentives for the power companies to enhance energy saving etc., and that the Government and the power companies should consider

these different measures although these have not been fully deliberated in the public engagement.

4.34 In the light of these considerations, the SDC **RECOMMENDS** that –

- (i) the Government and the power companies should further review the tariff structure with a view to promoting energy conservation. More study and discussion is required to agree on the objectives to be achieved, and all relevant considerations should be taken into account in the upcoming 2013 tariff review.

4.35 Some stakeholders from the private sector have concerns on charging the heavy users without taking into consideration their performance on energy efficiency and the intensity of energy consumption. Businesses with specific peak operating hours such as retails and restaurants also have a concern on the possible increase of electricity costs resulting from the time-of-use tariff structure. Comments on other socio-economic implications resulting from any change in the electricity tariff structure, e.g. affordability for the low income group, were received. Based on the views received, there was no apparent consensus on whether to implement a progressive or regressive tariff structure. In this light, the SDC **RECOMMENDS** that –

- (i) in the meantime, the power companies should continue to enhance existing programmes to support energy saving and efficiency among end-users.

Other Issues

4.36 Apart from the 11 action areas as discussed in previous sections, it is worth noting that other comments/views regarding the need for more public awareness-building and education related to climate change, as well as the growing concern over external lighting in Hong Kong are received during the PE exercise. For instance, it is generally agreed that education and promotion is an effective method of encouraging energy-saving behaviour with a view to reducing carbon emissions and combating climate change. It is also essential in transforming the market to be more energy-aware and adopt more energy-efficient technologies and practices. Participants at the focus group meetings and members of the public specifically highlight the importance of enhancing public education and publicity on climate change and building energy efficiency.

In facilitating the above, the SDC is of a view that the Government should spearhead the education and publicity efforts in a robust manner, with reference to such territory-wide campaigns as Clean Hong Kong Campaign. Pursuant to the above discussions, the **SDC RECOMMENDS** that –

- (i) the Government should launch more intensive public education and awareness programmes to widen and deepen the general awareness of the public about the relevance of climate change to the community –
 - on the commercial side, more educational work targeted at SMEs should be pursued; and
 - as for the general public, consideration should be given to launching a territory-wide campaign to encourage energy conservation to instigate behaviour change in the community.

4.37 On the other hand, specific comments from the public on energy wastage (and light nuisance) arising from excessive use of external lighting are also received. The SDC takes note that a government task force was formed in August 2011 to develop technical standards and parameters suitable for regulating external lighting in Hong Kong, and issued the Guidelines on Industry Best Practices for External Lighting Installations in January 2012 to encourage early action by the trade and relevant parties to minimise light nuisance and energy waste problems that may be caused by external lighting installations. The SDC deliberates on this matter and considers that there should be some urgency in tackling the external lighting issue. While taking note of the complexity of the issues involved, it considers that the need for some form of control of external lighting installations such as timing control should be looked into to mitigate the related problems, i.e. overly illuminated billboards and advertisements. Moreover, in view of the on-going engagements with relevant stakeholders on this issue, the **SDC RECOMMENDS** that –

- (i) the Government should continue to look into the matter of external lighting taking into account all relevant considerations.

5. Closing Remarks

5.1 The SDC's current PE process is entering its final phase upon the submission of this report to the Government. The Government's response to this report will formally mark the completion of this PE. With the engagement of a wide spectrum of stakeholders and the public, this PE reveals that the issues involved are complex and solutions not straight forward. The discussions among the SDC, its Strategy Sub-committee and the Support Group members were dynamic, inspirational and vigorous. As in the process of formulating the recommendations, finding viable solutions is a balancing process during which further questions might be raised and deliberations required. In this light, we need our collective wisdom to progress towards our common goal of achieving a low carbon city.

5.2 The recommendations of SDC comprise regulatory, facilitative, and promotional framework. They point to the need for a holistic approach with considerations in enhancing the systemic framework, facilitating changes of behaviour through effective means and devices, and promoting a sustainable educational process. They are all-embracing in the sense of facilitation to bring about mindset and behaviour changes.

5.3 While the recommendations of the SDC are by no means perfect solutions to how building users can improve energy efficiency in their places of work and dwelling, the key messages of this PE are the need for the people in Hong Kong to reflect on what each of us can do to help reduce carbon emission both at work and at home and to take appropriate actions immediately. In effect, this engagement process speaks the public aspirations for a bigger vision of how Hong Kong as a responsible member of the global village would contribute to reducing carbon emission. It is the mindset and behaviour change that would really help us achieve carbon reduction target and place Hong Kong among one of the low carbon city in the world. Everyone in Hong Kong has an important part to play.

Annex I List of Engagement Events

Engagement Events	Date
1. 1 st Regional Forum – New Territories East	16 Aug 2011 (Tue) (2:15pm-5:45pm)
2. Forum organised by The Hong Kong Institute of Architects (HKIA)	20 Aug 2011 (Sat) (9:30am –1:00pm)
3. Briefing for 18 District Council Chairmen and Vice-Chairmen	26 Aug 2011 (Fri) (11:45am–1:00pm)
4. Briefing for the Real Estate Developers Association of Hong Kong (REDA)	26 Aug 2011 (Fri) (12:45pm-3:00pm)
5. 2 nd Regional Forum – Hong Kong Island	30 Aug 2011 (Tue) (6:45pm–9:45pm)
6. Hong Kong General Chamber of Commerce (HKGCC) Forum	1 Sep 2011 (Thu) (3:00pm-4:00pm)
7. Briefing for Business Environment Council (BEC) and Climate Change Business Forum (CCBF)	5 Sep 2011 (Mon) (4:00pm-5:00pm)
8. Briefing for Building Subcommittee of the Land and Development Advisory Committee (LDAC)	9 Sept 2011 (Fri) (9:30am-10:30am)
9. Event on “Policy Tools for Green Growth – how to stimulate a green building economy” jointly organised by The British Consulate-General, Civic Exchange and Climate Change Business Forum	19 Sept 2011 (Mon) (11:00am-12:30pm)
10. 3 rd Regional Forum – Kowloon West cum Launch of Carbon Manager	24 Sept 2011 (Sat) (9:15am-12:45pm)

Engagement Events	Date
11. 4 th Regional Forum –New Territories West	11 Oct 2011 (Tue) (9:15am–12:45pm)
12. Training delivered by Programme Director to student facilitators in Mini Forum organised by The Open University of Hong Kong	13 Oct 2011 (Thu) (7:00pm-8:00pm)
13. Briefing for Advisory Council on the Environment (ACE)	17 Oct 2011 (Mon) (2:30pm-3:30pm)
14. Briefing for Panel on Environmental Affairs, Legislative Council	24 Oct 2011 (Mon) (2:30pm-3:30pm)
15. Briefing for The Hong Kong Institution of Engineers (HKIE)	26 Oct 2011 (Wed) (6:15pm-7:15pm)
16. Briefing for Energy Efficiency and Conservation Subcommittee (EE&C)	28 Oct 2011 (Fri) (10:00am-11:30am)
17. Mini Forum organised by The Open University of Hong Kong	10 Nov 2011 (Thu) (7:00pm-9:00pm)
18. 5 th Regional Forum – Kowloon East	11 Nov 2011 (Fri) (2:15pm–5:45pm)
19. Talk organised by Department of Science and Environmental Studies, The Hong Kong Institute of Education	15 Nov 2011 (Tue) (11:30am-2:00pm)
20. Briefing for Inter-departmental Working Group on Climate Change (IWGCC)	18 Nov 2011 (Fri) (2:30pm-3:15pm)
21. Briefing for St. James' Settlement's Green Committee	22 Nov 2011 (Tue) (10:00am-11:15am)
22. Seminar for NT West Elder Academies Cluster organised by Lingnan University	23 Nov 2011 (Wed) (9:30am-11:00am)
23. Seminar organised by Li Ka Shing Institute of Professional and Continuing Education	24 Nov 2011 (Thu) (4:30pm-6:30pm)

Engagement Events	Date
(LiPACE), The Open University of Hong Kong	
24. Briefing for Business Facilitation Advisory Committee (BFAC)	28 Nov 2011 (Mon) (2:30pm–4:30pm)
25. Briefing at The Hong Kong Polytechnic University	29 Nov 2011 (Tue) (10:00am–12:00noon)
26. Talk for MTR Corporation (MTRC) – Environmental Community of Practice (COP)	29 Nov 2011 (Tue) (5:00pm–6:00pm)
27. Briefing for Chartered Institute of Housing Asia Pacific Branch (CIHAPB)	1 Dec 2011 (Thu) (7:30pm-9:00pm)
28. Briefing for catering and SMEs sector	2 Dec 2011 (Fri) (2:30pm-4:00pm)

Annex II List of Supporting Organisations

Universities and Tertiary Institutions

- Chu Hai College of Higher Education
- City University of Hong Kong
- Hang Seng Management College
- Hong Kong Baptist University
- Hong Kong Shue Yan University
- Lingnan University
- The Chinese University of Hong Kong
- The Hong Kong Academy for Performing Arts
- The Hong Kong Institute of Education
- The Hong Kong Polytechnic University
- The Hong Kong University of Science and Technology
- The Open University of Hong Kong
- The University of Hong Kong
- Vocational Training Council

Public Authorities and Related Organisations

- Airport Authority Hong Kong
- Hong Kong Housing Authority
- Hong Kong Housing Society
- Hong Kong Productivity Council
- Urban Renewal Authority

Non-governmental Organisations

- Breakthrough Limited
- Green Council
- Scout Association of Hong Kong
- St James' Settlement
- The Boys' & Girls' Clubs Association of Hong Kong
- The Hong Kong Award for Young People
- The Hong Kong Council of Social Service
- The Hong Kong Federation of Youth Groups
- The Hong Kong Girl Guides Association

Business-related Organisations

- Association of Restaurant Managers
- Business Environment Council (Climate Change Business Forum)
- Federation of International SME Limited

- Hong Kong Federation of Restaurants & Related Trades
- Hong Kong General Chamber of Commerce
- Hong Kong Small and Medium Enterprises Association
- The Chinese General Chamber of Commerce
- The Hong Kong General Chamber of Small and Medium Business
- The Real Estate Developers Association of Hong Kong

Research Institutions / Think Tanks

- Centre of Architectural Research for Education, Elderly, Environment and Excellence Limited
- Hong Kong Policy Research Institute Limited
- Research Centre for Building Environmental Engineering
- Roundtable Institute and its Network
- Sino-Forest Applied Research Centre for Pearl River Delta Environment
- 30SGroup

Green Groups

- Friends of the Earth (HK)
- Greeners Action
- Greenpeace
- Green Power
- Kadoorie Farm and Botanic Garden
- The Conservancy Association
- WWF – Hong Kong

Professional Organisations

- American Society of Heating, Refrigerating and Air-Conditioning Engineers (Hong Kong Chapter)
- BEAM Society
- Building Services Operation and Maintenance Executives Society
- Chartered Institute of Housing (Asian Pacific Branch)
- Energy Institute (Hong Kong Branch)
- Environmental Management Association of Hong Kong
- Hong Kong Association of Energy Engineers
- Hong Kong Climate Change Forum
- Hong Kong Green Building Council
- Professional Green Building Council
- The Chartered Institution of Building Services Engineers – Hong Kong Branch
- The Hong Kong Institute of Architects
- The Hong Kong Institution of Engineers

- The Hong Kong Institute of Facility Management
- The Hong Kong Institute of Landscape Architects
- The Hong Kong Institute of Planners
- The Hong Kong Institute of Surveyors

(By alphabetical order under each category)